

1

GOVERNMENT OF INDIA
DEPARTMENT OF ARCHAEOLOGY
CENTRAL ARCHAEOLOGICAL
LIBRARY

CLASS _____

CALL No. 737.05 N.C.

Vol. 15

D.G.A. 79.





THE
NUMISMATIC CHRONICLE
AND
JOURNAL OF
THE ROYAL NUMISMATIC SOCIETY

PRINTED IN ENGLAND
AT THE OXFORD UNIVERSITY PRESS
BY FREDERICK HALL

THE
NUMISMATIC CHRONICLE
AND
JOURNAL
OF THE
ROYAL NUMISMATIC SOCIETY

EDITED BY

G. F. HILL, M.A.

KEEPER OF COINS, BRITISH MUSEUM

OLIVER CODRINGTON, M.D., F.S.A., M.R.A.S.

AND

G. C. BROOKE, B.A.

1243

FOURTH SERIES—VOL. XV



737.05
N.C.

Factum abijt—monumenta manent.—Ov. Fast.

LONDON:
BERNARD QUARITCH, 11 GRAFTON ST., W.

PARIS:
MM. ROLLIN ET FEUARDENT, PLACE LOUVOIS, No. 4

1915

OEN **OFFICIAL**

1 **STHL**

Acc. 1243

Date 15.3.54

Cell 737.05 / ~~R.A.S.~~

N.C.

has only been one attempt, so far as I know, to make a complete list of the published types. I refer to a little-known treatise by one Joh. Kofod Whitte of Copenhagen.¹ To a compilation of all the historical *loci classici* relating to Chios the author has added an alphabetical catalogue of the various coins known to him through publications or personal research. His total number of types amounts to 248, which is a great many for the period at which he wrote. I draw attention to this little book because of its remarkable accuracy, and because of the interest that an early work of this character cannot fail to arouse among numismatists. As is to be expected there is not much attempt in it at a scientific arrangement of the coins enumerated, but they are divided into eleven classes which, in their main lines, come very near to the results yielded by our far more voluminous material and consequently wider perspective.

In the following pages I shall try to supplement the work of Kofod Whitte with as many of the facts that have come to light since his day as I have been able to collect. I cannot pretend to have ransacked every possible source of information; but I have studied most of the big collections, and have done my best not to neglect any minor opportunities that have offered themselves in the course of my quest.

There is no need to discuss the significance of the main type on Chian money. When Leo Allatius wrote his famous description of the bronze coin with the figure of Homer on the reverse, the Sphinx was almost as unintelligible to him as were its riddles to the

¹ *De Rebus Chiorum publicis ante Dominationem Romanorum*. Hauniae, MDCCCXXXVIII.

contemporaries of Oedipus. It has for long been accepted, however, as the emblem of Dionysus, and was probably distinct both from *ἡ βαψφοδὸς κύων* of Sophocles,² and from the Ra-Harmachis of the Egyptians. Nor would it be profitable to open once more the question as to the relative merits of the theories regarding the religious or commercial origin of coin-types. As a matter of fact the Chian Sphinx seems to offer a compromise between the two. In its earlier days, at any rate, the city's badge partakes of a religious nature. Whether we look upon the Sphinx, especially in its hieratic attitude with one forepaw raised, as an attribute of Dionysus enjoining silence in respect of his mysteries, or as a guardian of the temple's treasures, there is nothing of the commercial element about it. But later on when first the amphora, and then the bunch of grapes were added to the type, the business interests of an essentially mercantile community were clearly being brought into notice.

This slow merging of a mystical aspect into a practical one is also suggested by the curious ornament which is to be observed on the head of the primitive Sphinx, but which is discarded with one exception³ soon after the middle of the sixth century. This ornament, like the Sphinx itself, undoubtedly hails from the East, though both had apparently long been domiciled in the Aegean area.⁴ Like so many

² *Oed. Rex*, 391.

³ Electrum Stater struck at time of Ionian Revolt when religious feelings must have been in the ascendant. P. Gardner, in *J. H. S.*, 1911, p. 151, and Pl. vii. 1, though the particular coin selected for illustration is probably a forgery.

⁴ See Hogarth, *Ionian and the East*, Lecture iii.

other elements in Hellenic art and culture we are driven to connect them with the recently discovered pre-Hellenic civilization.⁵ We see the spiral ornament on the heads both of Sphinxes and Griffins, on the ivories from Spata, and from a tomb at Knossos, on a terra-cotta plaque from Praesos, and on some of the gold plaques from the foundation deposit of the great temple at Ephesus. It has been called by various names by those who have tried to account for its occurrence on coins bearing a Sphinx. To one it has suggested a vine-tendril,⁶ to others a feather or "plumes",⁷ and to another again "the lock of immortality".⁸ This last theory is by far the most convincing. In discussing the Persephone relief in the National Museum at Athens, M. Svoronos draws attention to the separate lock of long hair on the head of Triptolemus, and traces its origin back to Egypt. It was an emblem of immortality there, and, being specially characteristic of chthonic deities, it was used also in representations of their attributes, Sirens, Sphinxes, and Griffins. The lotus-flower had a similar significance, and is sometimes seen grasped in the monster's upraised paws [Pl. I. 8]. M. Svoronos thinks that the spiral ornament in question was a conventionalized lock of hair assuming a tendril-like form under the influence of the lotus-flower so often associated with it.

Though we may be inclined to praise the Chians for

⁵ See Sir A. J. Evans, *J. H. S.*, 1912, p. 277.

⁶ Babelon, *Traité*, part i, pp. 190-1.

⁷ Dressel, *Zeitschrift für Num.*, 1900, vol. xxii, pp. 238-41. Canon Greenwell, *Num. Chron.*, 1890, pp. 4-5, and Sir H. Weber, *Num. Chron.*, 1899, pp. 276-8.

⁸ Svoronos, *J. Int. d'Arch. Num.*, 1913, p. 228, and note referring reader to *Das Athener National-Museum*, by J. Svoronos, pp. 113-14.

the constancy which they showed to their national emblem on their coins, and for the sobriety with which it was invariably represented, we must not forget that the Sphinx was by no means the peculiar possession of the island-state. It has even been suggested⁹ that the uplifted paw with which the Sphinx is shown on certain archaic silver coins ought to make one pause before attributing such coins unhesitatingly to Chios. In all the late bronze issues of the island, however, this position is the rule. Some of the early electrum¹⁰ too, about which no doubt has ever been raised, also shows the Sphinx with one uplifted forepaw [Pl. I. 8 and Pl. II. 10], as well as the late electrum stater [Pl. III. 9]. There seems no reason therefore to hesitate about the attribution of these early silver pieces, especially as their weight and fabric agree with those recognized as being peculiar to Chios. On the analogy of the Griffins of Teos alone we may assume that it was customary to represent these and similar monsters with one forepaw raised, and it is most likely that there were familiar statues at Chios of Sphinxes in this attitude, though no mention of such has come down to us. Additional support is lent to this by the fact mentioned above that the raised forepaw is a constant feature of the Sphinx on the Imperial bronze coinage, since we know that die-engravers at that time drew their inspiration largely from the statuary around them.

⁹ Dr. Dressel, *op. cit.*

¹⁰ In *Num. Chron.*, 1911, "Some unpublished Greek Coins," p. 89, I quoted an electrum twelfth from the Cabinet des Médailles, Paris, as affording further confirmation of this. This coin can no longer be taken as trustworthy evidence. See below, note 28, for further remarks.

Nevertheless, it is well to remind ourselves, when studying anepigraphic coins, that many peoples besides the Chians used the Sphinx as a badge. Among others Gergis in the Troad, Caunus in Caria, Perga in Pamphylia, Aphrodisias in Cilicia, Idalium in Cyprus, and last, though not least, Asoros or Gasoros in Macedonia,¹¹ all struck coins bearing a Sphinx as one of their types, if not the main one. And this use of the Sphinx, it must be remembered, was quite independent on the part of these smaller states. There was no alliance or obligation between them and Chios, still less any degree of relationship like that which induced the Teian colony of Abdera to use a Griffin as its *ἐπίσημον*.

It is not difficult as a rule to identify coins exhibiting a Sphinx alone, although a few aliens have crept into the Chian series in most of the national cabinets,¹² since, in addition to peculiarities of style, both the flan and the incuse square had a character of their own at Chios. But when one meets with coins bearing double types, it is extremely difficult, if not impossible, to decide whether they should be attributed to one or other of these rival claimants, or looked upon as alliance pieces between Chios and one of her neighbours on the mainland.¹³

¹¹ With regard to this hitherto unknown city, see Svoronos, *Jour. Int. d'Arch. Num.*, 1913, p. 224.

¹² An instance from the B. M. Coll. is No. 39, *Cat. Ionia*, under Chios, an ancient forgery. On this piece the Sphinx is depicted to r., an arrangement never found at Chios on silver till the first century B.C., when it appears on one or two of the Attic drachms then struck. The whole style of the coin, besides, is totally unlike any Chian issue.

¹³ See *Num. Chron.*, 1913, pp. 427-8.

Placed as she was athwart two of the principal highways of commerce in ancient times, it is not surprising that Chios became one of the earliest users of coined money among the Greek states. A large portion of the trade from the Far East that was borne along the Royal road¹⁴ between Ephesus and Susa viâ Sardis, must have passed by Chios on its way to Hellas and the West. With it in due course came the new invention of coinage, Miletus and other cities of the coast following the lead of Lydia, and Samos, Chios, and the rest carrying on the torch after a short interval. And less interesting from a purely numismatic point of view, though equally important as a source of wealth, is the fact that Chios lay in the direct path of that other great trade-route which connected Egypt and Syria with the ports and wheat-fields of the Euxine.

The people of Chios had always been traders.¹⁵ The produce of the island was not sufficient to support them, as is shown by their constant agitation for the *peræa* of Atarneus. But, in order to deal with the problem of population and food supply, they seem at an early age to have had recourse to commerce rather than to the primitive expedient of colonization which prevailed in the eighth and seventh centuries. They had trading stations no doubt in plenty, but they apparently never drove out whole swarms from their midst with the object of founding cities at a distance.¹⁶

¹⁴ Herodotus v. 52-4.

¹⁵ Aristotle, *Politics*, iv. 4.

¹⁶ Fustel de Coulanges, *Mémoire sur l'Île de Chio*, pp. 265-6, a work to which I am much indebted. There are records of a town called Chios in Egypt, which we may suppose to have been more trading station than colony, since it was most unusual among Greek states for the metropolis to give its own name to the latter.

Like those of the Aeginetans¹⁷ in the west of the Aegean, the commercial operations of the Chians radiated from Ionia in all directions, and even imposed their monetary standard on some of their customers. The importance of the Chian standard, which has lately been so ably demonstrated,¹⁸ made it the principal rival of the Aeginetic and the Euboic-Attic systems in the East up to the time of Alexander the Great. A little speculation as to its origin would perhaps not be misplaced before entering upon a detailed description of the coins themselves.

All early traditions concur in describing the pre-historic inhabitants of Chios as the Carians, Leleges, or Pelasgians, who occupied all the islands and coasts of Asia Minor prior to the Ionian immigration.¹⁹ Now that all myths are treated with respect until they are definitely proved to be worthless, there is satisfaction in finding confirmation of the above in some of the island place-names. The word Chios itself is probably Carian, there was a town of the name on the Triopian promontory,²⁰ and it certainly has no meaning in Greek. Of the same origin are also the village-names Babrantion and Bolissos (a name that still survives unchanged, at least in its written form), and the harbour called Kaukasa. Kardamyle, another village, and still surviving like Bolissos, is a link with the Leleges, and their similarly named town in Messenia. Finally, the mount Pelinaion recalls the Pelasgo-

¹⁷ See Head, *B. M. Cat., Attica*, Introduction, p. lrv.

¹⁸ See P. Gardner, "Coinage of the Athenian Empire," *J. H. S.*, 1913, p. 147, and ff.

¹⁹ See Strabo, xiii. 621; xiv. 632; Pausanias, vii. 2 and 4; Herodotus, i. 171.

²⁰ Stephanus Byzantius, *sub voce*.

Thessalian town Pelinna.²¹ But the most important tradition that has come down to us is that which connects Chios with the Minoan thalassocracy.²² Oenopion, grandson or nephew of Minos, is supposed to have settled in the island, and reigned there as king, introducing the cultivation of the vine, and destroying monsters in the approved heroic fashion. There must have been considerable affinity between the Minoans and the local peoples, and the rule of Oenopion and his sons seems to have been a success. Pausanias relates²³ that the tomb of Oenopion was venerated at Chios even in his day, and was one of the principal objects of interest there. Now, all this may be taken to show that Minoan influence was strong in the island during the second millennium B. C. We may assume that the Minoan civilization prevailed there. What then more likely than that weights and measures in use in Minoan Crete should have been introduced into prehistoric Chios with the vine and other advantages?

It must surely be generally admitted by this time that the so-called Phoenician weight standard was used in Crete at a period long anterior to the true Phoenicians and their wanderings.²⁴ The characteristic Chian standard has always been looked upon as a derivative of the Phoenician, so, now that we venture

²¹ See Fick, *Vorgriechische Ortsnamen*, pp. 60-2.

²² Pausanias, vii. 4 and 5.

²³ Pausanias, vii. 5. It is surprising that Pausanias does not refer to the other myth that makes Oenopion the son of Dionysus. The connexion between the two, especially at Chios, is so obvious that the myth cannot fail to have existed there from the earliest times.

²⁴ See Sir A. J. Evans, "Minoan Weights and Currency," in *Corolla Numismatica*, particularly the "silver dump" figured on p. 363.

to substitute Minoan for Phoenician, it is, to say the least, encouraging to find an independent tradition supporting the establishment of Minoan culture in Chios. Positive evidence as to this is lacking up to the present. There are no remains such as Melos, Thera, and even Delos have provided in such abundance. But there are "pelasgic walls" near the village of Myrmiki (*Μυρμήκι*) in the S.E. of the island that invite the spade of the excavator.

In the meantime, since the continuity of a weight-standard over such a long period of time cannot be proved, it seems better to use the term Graeco-Asiatic to describe the stater of the average weight of 225.6 grains (14.616 grammes).²⁵

II.

On the analogy of the evidence left by all the surrounding states, the earliest coins of Chios were presumably of electrum dating from the latter part of the seventh century B.C. But a difficulty confronts us here at the outset. None of the extant electrum pieces are as rude in style as some of the silver didrachms that formed part of the Sakha hoard, and of another similar find in Lower Egypt²⁶ [Pl. I. 3], not to mention the doubtful pieces belonging to the Aeginetic standard²⁷ [Pl. I. 1 and 2]. We have, besides,

²⁵ In doing this I am following the late Dr. Head in his *Coins of Ephesus*, and Prof. P. Gardner in his *Samos and Samian Coins*.

²⁶ *Num. Chron.*, 1890, p. 4, Pl. i. 16; *Num. Chron.*, 1890, pp. 276-7, Pl. xvi. 2; and *Zeitschrift für Num.*, 1900, pp. 233-41, No. 30, Pl. viii. 6.

²⁷ *Num. Chron.*, 1890, p. 18, Pl. ii. 15. With regard to the general question of early Ionian silver see *B. M. Cat., Ionia*, *Introd.*, pp. xxxii-iv.

no electrum coin with a Sphinx of so primitive a type as that conjecturally attributed to Samos (*B. M. Cat., Ionia*, Pl. iii. 20-2).

We are driven to conclude, therefore, either that the first Chian issues in electrum have not come down to us, or that the island struck silver a little before it began to use electrum. We must also allow, if the above-mentioned attribution to Samos be correct, that coinage did not begin in Chios quite as early as it did in Samos.

With that caution, then, we can proceed to examine the surviving coins. It is opportune to remark here that the first thing that strikes one on inquiring closely into any series of ancient coins is the immense amount of material to be dealt with, but after a very little shuffling and sifting it soon becomes evident that only comparatively few of the original issues are available for our study.

To illustrate this let us confine ourselves for the moment to the electrum coins. In addition to the fact already mentioned that no really primitive specimens of coins in this metal exist, it is worthy of note that we have no divisional pieces that can with certainty be attributed to Chios.²⁸ Considering the numbers

²⁸ M. Babelon, in Part i, p. 191, No. 335 of his *Traité*, and Pl. viii. 7, includes a twelfth-stater from the Cabinet de France in his Chian series. This coin, however, ought to be given to Teos, or perhaps more correctly to Phocaëa. It most certainly does not belong to Chios, as the animal depicted on it is a Griffin. This was first pointed out to me by Miss A. Baldwin, and I have since been able to verify her opinion by personal observation. There is a small electrum piece with a Sphinx of archaic style r. in the Cabinet de France, but it is too heavy for Chios besides being quite unlike any of her issues in style. It weighs 40 grains (2.59 grammes); clearly a Phocæic sixth.

and varieties of these little coins that were struck by the states using them, it is curious that none should have survived if they were ever made. We know of at least six different issues of electrum staters presumably belonging to Chios, but none of the thirds or sixths which the practice of other Asiatic mints would have led us to expect. We are almost justified in classing them, with the unknown staters of Phocaea, among those things that we may expect to find some day. On the other hand, if, as already suggested, there were no electrum current in Chios before the introduction of silver, the lack of small electrum pieces might straightway be accounted for, since fractions of the stater would have been more conveniently made in silver.

The monetary standards employed at Chios must now be briefly considered, although the main facts concerning them are perfectly well known.

In the case of the early electrum coinage the standard followed was the Graeco-Asiatic, or an adaptation of it, in which the stater weighed about 219.5 grains (14.18-14.24 grammes) at Miletus. At Chios the weight does not seem to have exceeded 218 grains (14.14 grammes).

In the case of silver the statement cannot be made quite so simply. As will appear below, the earliest issues seem to have followed various systems, as if the users were feeling their way until the Chian standard proper was finally established. The same phenomenon may be observed in the early silver coinage of Erythrae, Miletus, and Samos. It is not intended to number among these different systems the peculiar Aeginetic staters [Pl. I. 1 and 2] with a crouching Sphinx, as they

fall into quite a different category, and cannot be claimed as genuine products of the Chian mint. But, independently of them, we seem to find three different standards in the two small groups of coins that stand at the head of the true Chian issues. Though it may be urged that two or three isolated pieces make a slender foundation on which to build up a somewhat elaborate theory, the extreme rarity of the coins must be their excuse.

They will be found described under Period I, but at present we are only concerned with their weights, which are as follows:

105.10 grains (6.81 grammes), *Pl. I. 5*; 113.6 grains (7.36 grammes), *Pl. I. 5*; 120.0 grains (7.76 grammes), *Pl. I. 3*; and 129.9 grains (8.42 grammes), *Pl. I. 3*.

Now, though these coins are divisible, by their style, into two separate groups, there cannot have been any material lapse of time between their respective dates of issue. On the other hand, the variations in their weights are too great to be accidental, and the weights represent, besides, three well-known monetary systems. The first mentioned belongs clearly to the modified Graeco-Asiatic or Phoenician system, the second and third to the Chian, and the fourth to the Euboic.

The Euboic standard is known to have been used in coining early Asiatic silver (*B. M. Cat., Ionia*, *Introd.* p. xxxvi, and *Pl. xxxiv.* 3, 4, and 6). Though the pieces referred to are of doubtful attribution they serve to exemplify the close connexion that had always existed between the opposite shores of the Aegean, and may even be taken as proof of the Asiatic origin of the Euboic monetary system. It may safely be assumed that Chios had a share in whatever commercial trans-

actions took place over the area in question, and coins struck by Chios on the standard prevailing in Euboea and elsewhere would, no doubt, have facilitated her operations.

The modified Graeco-Asiatic system was indigenous to the whole district of Ionia, and one would naturally expect to find it current in one of the principal Ionian states. In fact, these silver didrachms, weighing about 108 grains (7.00 grammes), or possibly a little more, may have been issued in connexion with some of the early electrum coins for the purposes of eastern trade. As will appear below, they are probably contemporary with what I take to be the earliest extant electrum staters.

Twenty of such didrachms would have been equivalent in value to one electrum stater of 217 grains (14.14 grammes) max., at the conventional ratio of 10:1 then ruling. Considering that the metal used for these electrum pieces was a natural alloy, it seems a work of supererogation to try to arrive at the true proportionate values of silver and electrum coins by estimating the actual amount of gold and silver contained in the latter. The ratio must have been a conventional one, and, as M. Th. Reinach has pointed out,²⁹ it was probably maintained at 10:1 until the end of the fifth century B.C. It fell to 9:1 in sympathy with the reduction that subsequently took place in the value of gold, and later still, towards 330 B.C., to $7\frac{1}{2}$:1, after which electrum ceased to be used for coinage. These equations can all be proved from actual facts, as the learned author proves them at length in the

²⁹ "De la valeur proportionnelle de l'or et de l'argent dans l'antiquité grecque," *Rev. Num.*, 1893 and 1902.

treatise quoted, and there is no need to call in the question of alloy in any of the cases he gives. The fourth-century electrum issues of Syracuse and Carthage were of quite a different order, for there the gold used was deliberately and even fraudulently alloyed.

The Chian standard, which regulated the bulk of the island's silver issues for more than 250 years, seems, on the evidence of these early coins, to have been employed there at least as soon as the Euboic and before the Graeco-Asiatic.

The coin illustrated, **Pl. I. 3**, is the earliest known representative of the system, though it is contemporary with the similar coin struck on the Euboic standard as detailed below. They are undoubtedly the earliest coins of Chios that we possess; and, on grounds of style, may safely be assigned, like the Aeginetic staters, to the end of the seventh century B.C.

The Aeginetic system had already a fairly wide range at this time. As is shown by the staters with the crouching Sphinx, and others of various types that have been found with them, some sort of monetary union existed between Aegina, several of the Cyclades, and certain coast towns and islands of Asia Minor.⁵⁰ There must have been a tendency among other small neighbouring states either to use the same standard or to adapt their own to it as the system best suited to the interests of their trade. At Teos the Aeginetic standard was taken over bodily, but Chios seems to have had sufficient independence to frame a standard of her own.

Though it must remain nothing but a theory, by far

⁵⁰ *Num. Chron.*, 1884, p. 269, and 1890, p. 13.

the most likely way to account for the rise of the characteristic Chian standard is to regard it as an adjustment between the Graeco-Asiatic and the Aeginetic systems.³¹ This was effected by raising the weight of the Graeco-Asiatic didrachm from 108 grains (7.00 grammes) to 123 grains (7.97 grammes) max., which is almost exactly $\frac{5}{8}$ of the Aeginetic stater weighing 196 grains (12.60 grammes). In other words, eight of the new didrachms would exchange against five of the latter without the necessity of any calculation or weighing.

PERIOD I. 625-575 B.C. (?).

It will of course be understood that the limits assigned to this period are only approximate. It is impossible to say exactly when coinage began in Chios, nor is there any historical event, between the dates suggested, of a nature likely to have left its mark on types or standard.

It was in the latter days of the Ionian League, and an oligarchical government held sway in Chios. There were occasional wars between the island and Erythrae towards the end of the seventh century, and before the turn of the sixth Chios sent troops to the assistance of Miletus when the latter was fighting against Alyattes of Lydia. In effect the relations between Chios and Miletus seem to have been intimate at this time. The Milesians, aided by contingents from the most enterprising states of the coast and islands, had founded Naukratis in Lower Egypt early in the seventh century. In the great temple there, called the Hellenion, the names of all the peoples who contributed to its

³¹ G. F. Hill, *Handbook of Greek and Roman Coins*, p. 39.
NUMISM. CHRON., VOL. XV, SERIES IV.

erection were recorded, and that of the Chians stood at the head of the list. Constant communication must have been maintained between Egypt and Chios, for commercial activities were growing fast. It is not surprising, then, that, as stated above, some of the island's earliest coins should have been found in Lower Egypt. In fact, up to the present, the site of Naukratis has, so far as we know, been the only source of supply for the early silver didrachms.

As regards artistic development it is well known how advanced Chios had already become. The seventh century saw the rise there of a whole school of early sculpture. The names of Malas, Mikkiades, and Archermus, members of a single family of sculptors who followed each other in direct line, have been preserved for us by Pliny.³² Glaucus, the metal-worker, who was patronized by Alyattes, was also a native of the island. It is tempting to think that some of these men, whom we associate with the dawn of art in the Greek world, may have influenced the die-cutters of the first Chian coins.

The coins which I would assign to this period are the following, and I should like to remark here once for all that the lists of the various types given below do not aim at being exhaustive.

When a type is rare I have recorded particulars of every specimen known to me either through publications or through having been able to examine the collections containing them.

³² *Hist. Nat.*, xxvi. 11. Commenting on Jex-Blake's translation, Dr. H. L. Ulrichs remarks that Malas was not the great-grandfather of the sons of Archermus, mentioned later, but the point is only of secondary importance here.

In the case of common varieties I have been content to cite three specimens only, so as to give the extreme variations of weight, &c., with the addition of a qualifying note such as *not rare*, *common*, and so on.

1. *Obv.*—Sphinx of rude style crouching l. on plain exergual line; wing curled; and long hair gathered into rough knot on nape of neck. Before it indistinguishable object or objects.

Rev.—Incuse square roughly divided into four unequal parts, and small countermark similarly but more evenly divided. Both punch-struck.

- R. $\frac{20.50}{17.50}$ mm. 188 grains (12.18 grammes). Aeginetic stater. Coll. Sir H. Weber.

$\frac{20.50}{18.00}$ mm. 187 grains (12.12 grammes). Aeginetic stater. Sotheby's Sale Cat. Warren Coll., 1905, No. 31.

$\frac{20.00}{18.00}$ mm. 184.75 grains (11.97 grammes). Aeginetic stater. Coll. B. Yakountchikoff ex Coll. Prince Chakhouskoy. Egger's Sale Cat., 1908, No. 547. [Pl. I. 1.]

$\frac{21.00}{18.00}$ mm. 187 grains (12.12 grammes). Aeginetic stater. Sotheby's Cat. Sherman Benson Coll., 1909, No. 695.

$\frac{21.00}{19.50}$ mm. 192 grains (12.44 grammes). Cab. de France, ex Taranto find. [Pl. I. 2.]

$\frac{21.50}{19.00}$ mm. 190.75 grains (12.36 grammes). Mus. of Fine Arts, Boston, Mass., U.S.A., ex C. P. Perkins's Coll., No. 492 of Cat.

This very rare and primitive coin was first published by Canon Greenwell in *Num. Chron.*, 1890, p. 18, Pl. ii. 15, while describing a hoard that contained three specimens of the type, one of which, now in Sir H. Weber's collection, is given above.

As already suggested, this coin cannot be unhesitatingly attributed to Chios, although it has been associated with the island for so long by numismatists that it would be presumptuous to omit it here. It is so totally different in style, however, from the usual products of the Chian mint that one is almost driven to prefer some other source of origin. On the other hand it would be difficult to conceive of a more fitting prototype for the well-known fifth-century didrachm of Chios than the coin next to be described, Pl. I. 3. Practically every step in the development from one to the other can be traced. But the Aeginetic staters are altogether foreign to the series. As Canon Greenwell pointed out, the appearance of the Sphinx upon them partakes more of animal than of human characteristics. The work is different in many ways from that of No. 2, although the two coins are in all probability roughly contemporary, the prominence of the chin in No. 1 being especially remarkable. The object or objects in front of the Sphinx have been called by various names, but on no specimen known to me are they sufficiently clear to warrant a guess as to their nature. The association with Chios of course suggests an amphora, but I can see no justification for it, still less for a vine branch. There are at least two distinct dies to be recognized, both obverse and reverse, but the differences between them are of no importance. The countermarking of the coins seems to have partially obliterated the symbol in most specimens. I illustrate two in order to show that the smaller of the two incuse squares is really a countermark, and not part of the main punch mark as has been suggested. A reference to the plate will show

that these coins are from the same reverse die, yet the small incuse occupies a relatively different position on each.

It is the same countermark as occurs on the coin attributed to Cos in *B.M. Cat., Caria*, Pl. xxx. 1, to Cnidus, do. do., Pl. xiii. 7, and to Delos, *Num. Chron.*, 1890, Pl. ii. 11; also possibly on the gold stater of Phocaea, *Num. Chron.*, 1875, Pl. x. 6.

The globular, or bean-shaped, flan, the punch-striking of the reverse, and the small countermark of this coin are all Ionic in character, and quite distinct from the typical Aeginetic incuse and anvil method of striking which mark the western group of coins so closely connected with it.²³

It seems evident, therefore, that we have here an issue of some Ionian state in temporary league with Aegina and other cities, though there is nothing to show to what particular state it should be attributed.

We come now to what may be considered to be the first genuine Chian issues, beginning with the earlier of the two groups of coins showing varying standards.

2. *Obv.* — Sphinx of rude style seated l. on roughly dotted exergual line; forelegs united and straddled; wing curled; hair long with a separate lock descending from crown of head and curling upwards at tip. In field l. a rosette.

Rev. — Roughly quartered incuse square; punch-struck.

Al. 16.25 mm. 120 grains (7.76 grammes). Chian didrachm. Berlin Cab. ex Sakha hoard.

[Pl. I. 3.]

16.75 mm. 129.9 grains (8.424 grammes).

Euboic didrachm. Brit. Mus.

²³ See illustrations accompanying the late Mr. W. Wroth's description of the famous Santorin hoard, *Num. Chron.*, 1884, Pl. xii, and Canon Greenwell's account of a similar find, *Num. Chron.*, 1890, Pl. ii. 9-16.

These two coins, which, to the best of my belief, are the only known specimens of their type, were probably struck from the same obverse die, and certainly from the same reverse one, the British Museum specimen being the earlier.

The Berlin specimen was published by Dr. Dressel in the *Zeitschrift für Numismatik*, 1900, pp. 238-41, No. 30, and in the *Numismatic Chronicle* for 1911, pp. 85-93, I drew attention to the one in the British Museum.²⁴

Several points in connexion with these interesting coins have already been touched upon above. Attention may be drawn in passing to their very early style betrayed by the grotesque profile and the large head. They can safely be assigned to the end of the seventh century B.C., and are at least as old as the Aeginetic staters.

It is interesting to note that the quartered incuse square already appears at this early date, and must necessarily be placed before the plain incuse of coins such as Nos. 4 and 5, although, in the absence of other evidence, the latter form is generally regarded as the more primitive of the two.

With regard to the rosette in the field it is conceivable that it may commemorate some fleeting alliance with Erythrae. But I do not feel inclined to support the idea, the two states having been almost constantly at variance. Besides, a more plausible explanation of the symbol is to be found in the solar

²⁴ In the course of my remarks on that occasion I was wrong to place these coins in the same class as the didrachm published by Canon Greenwell in *Num. Chron.*, 1890, p. 4, since the latter belongs to the group next to be described.

emblem on certain coins of Paeonia and Macedonia.³⁵ At first sight this may not appear quite obvious to those who have been accustomed to regard the Sphinx as a peculiarly Dionysiac attribute.

M. Svoronos has shown us, however, in his most interesting paper, that both Sphinxes and Griffins figured in the imagery of the sun-worship that prevailed throughout nearly the whole district between the river Axius and the Rhodope mountains. This cult had its centre on the summit of Mount Pangaeum, and it can be traced from the Derronians in the west to the Sagraeans in the east, from the Laeaeans in the north to the island of Peparethus in the south through the prevalence on their coins of the solar emblem of a rosette of pellets in various forms. For details I must refer the reader to M. Svoronos's learned article.

On the other hand, to the immediate north of Mount Pangaeum extended the land of the Edones, and to the east of it that of the Dionysians, where the worship of Dionysus had flourished from time immemorial. In fact the two cults seem to have overlapped both in their symbolism and in their geographical distribution. The votaries of Dionysus adopted the κύκλος 'Ηλίου, and those of Zeus the Sphinx and the Griffin.

Among the Edones, who, as we have seen, were worshippers of Dionysus, was a city called Asoros or Gasoros, to which reference has been made above. This city struck coins over a considerable time, for specimens are known representing the archaic, the transitional, and the fine periods of art, with a Sphinx to r. On a transitional piece, now in the Vienna cabinet, the

³⁵ J. N. Svoronos in *Journal Int. d'Arch. Num.*, 1913, pp. 193-280.

solar emblem, of a form very similar to that on this archaic coin of Chios, is to be seen in front of the Sphinx.

It seems highly probable that the Pangæan countryside may be the original home of the Chian Sphinx, and fresh force is thereby added to the supposition that the type under consideration may represent the first monetary issue made by Chios. The Sphinx in combination with the solar emblem was at home on the Thracian border of Macedonia, and was no doubt taken over with the new religion on its introduction into the Ionian island. The symbol then ceased to have any meaning in its new surroundings, and was forthwith discarded. In any case it never appears again on the coinage.

The second group of coins exhibiting varying standards, which is the next to be examined, includes the earliest type of electrum stater that has come down to us. Judging by style alone, I venture to suggest that the staters described below were struck during the first quarter of the sixth century. This theory is supported by their similarity to the silver didrachms that accompany them here. These latter, as already observed, come sufficiently near to No. 2 in general appearance to show that no great interval of time can have separated them.

Taking the electrum staters first, we have:

3. *Obv.* — Sphinx of rude archaic style seated r. on exergual line, consisting of two parallel lines with dots between. She has wing slightly curled; hair lying in a thick mass on nape of neck, with a separate lock rising from crown of head and ending in a spiral curl; and round ear-ring. Further foreleg shows behind nearer.

Rev.—Deep incuse square divided into four parts, and punch-struck.

El. $\frac{21.00}{19.00}$ mm. 218 grains (14.14 grammes). Milesian stater. Cabinet de France. [Pl. I. 4.]

$\frac{21.50}{18.25}$ mm. 216.2 grains (14.01 grammes). Milesian stater. Cabinet de France.

These two coins are Nos. 331-2 of M. Babelon's *Traité*, vol. ii. The former was first published by Ch. Lenormant in *Rev. Num.*, 1856, p. 12, Pl. ii. 1, where he alludes to it as of *très ancien style*. The second is a variety of it, and is the only other specimen of the type known to me. They differ mainly in the form of the exergual line, which, in the case of the latter, seems to consist of a row of dots only, but both are struck from the same reverse die.

It will be noticed that the style of these coins is much better than that of No. 2, and the whole aspect of the Sphinx is more like what it assumed in later times, but the sloping forehead and coarse features typical of primitive work are still there.

4. *Obv.*—Sphinx of rude archaic style seated l. on plain exergual line; wing curled; hair in uniform mass like an Egyptian wig, with long separate lock rising from crown of head and projecting backwards; forelegs separate, but not drawn in perspective.

Rev.—Plain incuse square, punch-struck.

R. 15.00 mm. 116.8 grains (7.57 grammes). Chian didrachm. Berlin Cab. ex C. R. Fox Coll., Coll., 1873. [Pl. I. 5.]

16.50 mm. 105.1 grains (6.81 grammes). Graeco-Asiatic didrachm. Coll. Sir H. Weber, from find in the Delta, 1890.

15.00 mm. 113.6 grains (7.36 grammes). Chian didrachm. Coll. Sir H. Weber, from Sakha hoard, 1899.

This type, which is clearly a direct descendant of No. 2, was first published by Canon Greenwell in *Num. Chron.*, 1890, p. 4.

The Berlin specimen and Sir H. Weber's Chian didrachm are from the same obverse die, while Sir H. Weber's Graeco-Asiatic didrachm is from the same reverse die as the Berlin coin.

These didrachms must be considered earlier on the whole than the electrum stater No. 3, though the differences to be observed may be partly due to careless execution. It is worthy of note that the dies for electrum coins seem, as a rule, to have been more elaborately prepared than those for silver ones. Another small point, illustrating this time the conscientiousness of archaic art, is that, throughout the sixth century, the forelegs of the Sphinx are almost invariably drawn so that both should be seen. And it may be broadly stated that, after the period when one foreleg is represented raised, the earlier coins have the legs further apart than those which succeed them.

The paucity of dies, to which attention has been drawn, in all the coins hitherto described, shows that they cannot have been struck in large quantities. This is only what one would expect from such early issues, and helps to confirm their attribution to the dates suggested.

PERIOD II. 575 (?)–545 B. C.

The early portion of this period is more remarkable in the history of Chios for the aesthetic and commercial progress made by her people than for any important political event. In 550 B. C., however, Croesus overthrew the Ionian League, though he refrained from subju-

gating the two island states of Chios and Samos. The oligarchic or aristocratic form of government continued at Chios down to the time of the final extinction of the League by Harpagus in 545 B.C.

Since all autonomous coining of electrum must have ceased with the imposition of Persian rule under Cyrus, as Prof. P. Gardner has conclusively shown,³⁶ the task of fixing the date of the remaining Chian issues in this metal is considerably simplified. Three at least of the known types still unrecorded here must, in consequence of the above, fall automatically into the present period. They are none of them so old in style as the type last quoted, No. 3, nor are they yet suitable for inclusion among the coins of the Ionian Revolt, about which there will be more to say later on.

As regards their individual arrangement it is of course impossible to be positive, and the order in which they are placed below is only intended to be conjectural. Still, by comparing these three widely divergent types with the more or less contemporary silver didrachms, which afford a far less broken scheme of development, I hope to be able to show that the two classes mutually support each other without necessarily having been issued together. It is possible of course that some of the didrachms described under Period III may belong here, but in the present state of our knowledge anything more definite than what I am already proposing would be the merest guess-work.

There is certainly no lack of material from this time

³⁶ "The Coinage of the Ionian Revolt," *J. H. S.*, 1911, p. 156.

onward, and it is clear from the variety of types how intense was the artistic life of the time. The sculptor Archermus, the third of his line, was flourishing, of whom it has been said that he was the first to give wings to Nike. One is irresistibly reminded of this phrase by the beautifully finished stater [Pl. I. 8], and what I like to look upon as its contemporary didrachm [Pl. I. 14], in which the Sphinx's two wings are shown in a fine perspective. This arrangement was never attempted again until the beginning of the Roman period.

The following are the electrum coins referred to above:

5. *Obv.*—Sphinx of archaic style seated r. without exergual line; wing curled; hair in dense mass like an Egyptian wig; only one foreleg showing.

Rev.—Plain incuse square; punch-struck.

El. $\frac{18.75}{16.50}$ mm. 216.97 grains (14.06 grammes).

Milesian stater. Br. Mus. ex Bank Coll.

[Pl. I. 6.]

$\frac{19.50}{18.00}$ mm. 216 grains (14.00 grammes). Milesian stater. Berlin Cabinet.

6. *Obv.*—Sphinx of archaic style seated r. without exergual line; wing slightly curled; hair in long straight ringlets; only one foreleg showing.

Rev.—Plain incuse square: punch-struck. (The absence of quartering cross in this type may possibly be due to wear.)

El. 19.00 mm. 217.75 grains (14.11 grammes).

Milesian stater. Coll. B. Yakountchikoff ex Rothschild Coll. No. 370, Cat. 1900.

$\frac{20.75}{18.00}$ mm. 216.35 grains (14.02 grammes).

Milesian stater. Coll. R. Jameson, Cat. No. 1519, from Vourla find, 1911. [Pl. I. 7.]

7. *Obv.*—Sphinx of refined archaic style, wearing round earring, and seated l. without exergual line; both wings showing, curled at tips; hair long; further forepaw raised and holding lotus flower.

Rev.—Incuse square somewhat roughly divided into four parts; punch-struck.

El. $\frac{19.00}{17.00}$ mm. 216.5 grains (14.03 grammes).

Milesian stater. Coll. B. Yakountchikoff ex Montagu Coll., No. 589, Sotheby's Cat. 1896.

$\frac{20.00}{18.50}$ mm. 217.9 grains (14.12 grammes).

Milesian stater. Coll. R. Jameson, Cat. No. 1520, ex Philipsen Coll., No. 2241. Hirsch's Cat., 1909. [Pl. I. 8.]

$\frac{21.00}{17.75}$ mm. 217.13 grains (14.07 grammes).

Milesian stater. Cabinet de France; No. 335 of Babelon's *Traité*, vol. ii.

20.00 mm. 218.2 grains (14.14 grammes). Milesian stater. No. 1087, Cat. Egger, xlv. 1914.

The only point that these three staters have in common is the absence both of the exergual line and of the separate lock of hair.

No. 5 is well known to all students of the National Collection, and was published in the catalogue for Ionia, p. 7, and Pl. i. 19. It was chosen by Prof. P. Gardner to illustrate his paper on the Gold Coinage of Asia in the Proceedings of the British Academy, 1908, when he first propounded his theory about the coinage of the Ionian Revolt, but rejected later (*J. H. S.*, 1911, p. 154, note 11) as being of too early style.

No. 6 was published by M. R. Jameson in his description of the Vourla find (*Rev. Num.*, 1911, pp. 60-8), when, without knowing of Prof. Gardner's

paper, he came to the same conclusion about the probable issue of a federal coinage at the time of the Ionian Revolt. The author there recognized that this particular coin is older than the majority of those composing the hoard to which the date of 500 B.C. is roughly assigned.

This coin is of later style than No. 5, though it has a similar plain incuse. It is possible that the absence of the crossed lines in this case may be due to wear, since traces of what might have been quarterings are to be detected in the square, whereas the reverse of No. 5 shows no signs of them at all.

Both the coins here described are from the same dies.

No. 7. So far as I am aware this beautiful stater has never been the subject of any special reference. It is an example of all that is finest in archaic art, and a proof of the high level reached by craftsmen in Chios at this period. Unfortunately none of the specimens that I have come across is in really good condition, M. R. Jameson's coin being quite the finest of the four. This prevents any comparison of dies in the case of the obverses, but for the reverses two are recognizable, one between M. Yakountchikoff's and the Egger Cat. specimens, and the other between M. Jameson's and the French Cabinet's coins.

This type affords the only instance of an electrum coin at Chios, with the exception of the fifth-century stater, in which the Sphinx is depicted to left.

The silver didrachms that I suggest for this period are the following:

8. *Obv.*—Sphinx of archaic style seated l. on plain exergual line; wing curled; hair in dense mass like an Egyptian wig; both forelegs showing, but not drawn in perspective.

Rev.—Plain incuse square ; punch-struck.

R. 17.00 mm. 120.2 grains (7.79 grammes). Chian didrachm. Berlin Cabinet ex Imhoof-Blumer Coll. 1900. [Pl. I. 9.]

9. *Obv.*—Sphinx of archaic style seated l. on dotted exergual line; wing slightly curled; hair long, with separate lock hanging from crown of head and ending in a spiral curl; further forepaw raised holding a lotus-flower; between fore and hind legs a cock's head l. Circle of dots.

Rev.—Quartered incuse square ; punch-struck.

R. $\frac{17.00}{15.00}$ mm. 121.3 grains (7.86 grammes). Chian didrachm. Berlin Cabinet, from Sakha hoard, 1899. [Pl. I. 10.]

? mm. 120.4 grains (7.80 grammes). Chian didrachm. Berlin Cabinet, from recent find in Egypt, 1914.

$\frac{18.00}{15.00}$ mm. 119.75 grains (7.76 grammes). Chian didrachm. Coll. J. R. McClean, Fitzwilliam Museum, Cambridge. [Pl. I. 11.]

10. Variety of preceding in which the Sphinx does not hold lotus-flower in upraised forepaw.

R. $\frac{18.00}{13.50}$ mm. 111.9 grains (7.244 grammes). Chian didrachm, from Sakha hoard. *Num. Chron.*, 1899, p. 277, No. 16.

$\frac{19.50}{12.75}$ mm. 121.8 grains (7.895 grammes). Chian didrachm. My collection ex Philipson Coll., No. 2242, Hirsch's Cat., 1909.

11. *Obv.*—Sphinx l. like No. 9, except that the exergual line is plain, and that there is a lotus-flower between Sphinx's fore and hind legs in place of the cock's head.

Rev.—Quartered incuse square of larger size than any hitherto described ; punch-struck.

- AR. $\frac{17.00}{13.50}$ mm. 120.4 grains (7.80 grammes). Chian didrachm. Coll. B. Yakountchikoff ex O'Hagan Coll., No. 587 (part of) Sotheby's Cat., 1908. [Pl. I. 12.]

Broken didrachm known to Dr. Dressel of Berlin.

12. *Obv.*—Sphinx l. like No. 9, but of somewhat later style and without either exergual line or lotus-flower in upraised forepaw. The separate lock on head is also doubtful.

Rev.—Quartered incuse square of earlier type than No. 11; punch-struck.

- AR. $\frac{15.00}{13.50}$ mm. 115.5 grains (7.48 grammes). Chian didrachm. Coll. Sir H. Weber from Sakha hoard, *Num. Chron.*, 1899, p. 277, No. 15.

17.00 mm. 119.75 grains (7.76 grammes). Chian didrachm. Coll. B. Yakountchikoff, No. 368, Hirsch's Cat., vii. 1902. [Pl. I. 13.]

13. *Obv.*—Sphinx of refined archaic style seated l. on plain exergual line; she wears round ear-ring; both wings show in perspective curled at tips; hair long with conventionalized lock of tendril-like form projecting from back of head; further foreleg shows behind nearer.

Rev.—Quartered incuse square of similar type to No. 11; punch-struck.

- AR. 16.25 mm. 121.6 grains (7.88 grammes). Chian didrachm. Coll. B. Yakountchikoff ex Sherman Benson Coll., No. 696, Sotheby's Cat., 1909. [Pl. I. 14.]

No. 8. This coin is unique in my experience, and, although in bad condition, may be seen to have points of resemblance, especially about the head, with the first electrum stater of this period, No. 5. The manner in which the forelegs are drawn and the plain incuse square connect it with the silver didrachm, No. 4.

This is the last time that the plain incuse appears in the series, and there is no sign here whatever of the punch having originally been quartered but worn smooth by use.

Nos. 9-12. These types were first published by Sir Hermann Weber and Dr. Dressel in their descriptions of the Sakha hoard (see note 7 above). Judging from the varieties to be noted among them, their issue, taken as a whole, seems to have been a more plentiful one than any of its predecessors. I illustrate two coins of type No. 9 [Pl. I. 10 and 11] so as to show the cock's head and peculiar exergual line clearly.

There must have been some little interval between No. 8 and the present group, which is distinguished from all other silver issues of Chios, previous to the Roman period, by the Sphinx's upraised forepaw. The design has suddenly become more ornate, and the dotted border, very finely executed on some specimens, is a novel and unusual feature for the period. Still, the large head and straightly falling mass of hair are typical of archaic art, and connect the group intimately, although the type is so different in other respects, with the electrum stater No. 6. The peculiar shape of the Sphinx's wing also does this, for no wing quite like it is seen again on the sixth-century didrachms, though it had already occurred on the earlier electrum [Pl. I. 4]. The upraised forepaw is, of course, a link with the electrum stater No. 7, which, as we have seen, may on general grounds of style be placed later than No. 6.

No. 12, in spite of its older reverse, is, I think, a little later than the rest of these coins with the dotted border, because of the smaller head and the attempt made to

show its shape beneath the hair.³⁷ The flan is also less bullet-shaped. The two coins representing this type, which is the rarest of the group, are struck from the same dies, both obverse and reverse. Otherwise I have observed no community of dies between this and the other members of the group.

With regard to the cock's head and lotus-flower symbols, it is difficult to say whether they should be regarded as magistrates' signets, or simply as adjuncts peculiar to the Sphinx. The former would not be inconsistent with the oligarchic government in power at the time, especially as just such a use was then being made of symbols at Teos.³⁸ But if the practice had ever been adopted, it is hard to see why it should have been abandoned before the coming of the tyrants. And yet we have the evidence of No. 12 to show that this must have taken place even within the limits of this particular group.

The facts necessary for the settlement of the question are very incomplete, of course; but until the sands of Egypt reveal more specimens I prefer to consider these symbols as mere accessories to the design of the coins.

The lotus-flower, as we have seen, was associated with the Sphinx in its rôle as a chthonic deity, and the cock had a similar significance.³⁹

³⁷ When publishing this coin in *Num. Chron.*, 1899, p. 277, Sir H. Weber placed it earlier than the type here called No. 10, but the dotted circle is not visible on his specimen.

³⁸ *B. M. Cat., Ionia*, pp. 309-10, and Pl. xxx. 2, 3, 4, and 5.

³⁹ See D'A. W. Thompson's *Glossary of Greek Birds*, sub voce ἀλεκ-τρυών, p. 24. It appears as an offering to the dead on some of the archaic Spartan bas-reliefs; see the summary account of these monuments in Tod and Wace, *Catalogue of the Sparta Museum* (1906), pp. 102 ff.

No. 13. This charming coin has never been published, and is unique to the best of my belief. No one can fail to recognize its close resemblance to the electrum stater No. 7. In fact, it might be the work of the same artist. Though this resemblance naturally confines it to the limits of the present period, it comes much nearer in general appearance to the more familiar types next to follow than to anything that has preceded it in the course of this review. It seems, in a word, to stand on the boundary between the rare coins that we have just studied somewhat minutely and the comparatively common types of the later archaic period.

It will have been noticed that all the coins just described, representing types 8-13, belong unequivocally to the local standard of Chios. The only piece about which a doubt might be raised is the former of the two specimens under No. 10, weighing 111.9 grains (7.244 grammes). But since it is well in excess of the maximum attained by the Graeco-Asiatic standard, it seems fair to regard it as a light specimen of the Chian system. In fact, from the beginning of this period till the middle of the fourth century or thereabouts, there is no reason to suppose that any other standard for silver but the local one was used at Chios.

PERIOD III. 545-500 B. C.

It has already been observed that the coinage of electrum must have ceased under the Persian rule that now controlled the affairs of Chios. On the other hand, there can be no doubt but that the coinage of silver largely increased from this time onwards. Not only is there a great variety of types, but the coins themselves are no longer so rare as previously.

The chief characteristics to be noted are the occasional use of a wreath round the type, and the gradual evolution of the amphora in front of the Sphinx. Two contemporary artists are worthy of mention. These were Bupalus and Athenis, the sons of Archermus, and enough is known about them to show that they worthily carried on the traditions of their family.

The growth of trade in spite of foreign rule, that we may deduce from the more plentiful coinage, may possibly be connected with the acquisition by the Chians at this time of the territory of Atarneus. We are told that they owed this grant of fertile land to the generosity of Cyrus in return for treacherously giving up to him a Lydian called Pactyas, who had taken sanctuary at the temple of Athena Poliouchos in the island.⁴⁰

Whatever the truth of the story may be, the Chians benefited much from their new possessions, which contained silver mines and hot springs, as well as the direct means of increasing their food supply.

Under the influence of the Persians a new party arose in the state that led to the overthrow of the oligarchy and the establishment of a tyranny. As in all the other cities of the League now subject to Persia, the tyrants in Chios were natives of the island, and one of them, named Strattis, has acquired a certain notoriety.

It was he who supported Histiaeus, tyrant of Miletus, in selfishly refusing to destroy the bridge over the Ister, and so ruin the Persians under Darius in Scythia. Histiaeus was rewarded for his services, but led the

⁴⁰ Herodotus viii. 106, and Pausanias iv. 35.

revolt nevertheless. Strattis, who seems to have remained faithful to Darius during the early stages of the revolt, was deposed, and the aristocratic government was re-established in Chios.

This rapid review of events between the fall of the Ionian League and the famous Revolt is sufficient for numismatic purposes, as we have no means of knowing whether or not the main political events of the day found an echo in Chios, and, if so, were accompanied by any particular issue of money.

It would be of supreme interest if we could trace signs of the impression made on the vassal state by the death of Cyrus, for instance; by the victories of Cambyses in Egypt, not at all an unlikely cause of celebration; or by the accession of Darius. We find coins with a wreath around the type, we note the introduction of a new symbol, and of an important alteration in the type, but we have no hint as to what brought about the changes. We do not even know in what order the various issues, that inevitably fall into this period, followed one another. In attempting their arrangement I have adopted an order that is purely arbitrary, but at least has the merit of being systematic.

Assuming that the amphora, when once introduced, was not again omitted from the type, it follows that coins without an amphora must come first. Then it will be noticed that the amphora takes different forms, which may be supposed to have preceded the time when its shape and position became fixed as we know them on the fifth-century didrachms.

The development of the incuse square on the reverses will be found to confirm this arrangement on the whole,

the punch-mark becoming shallower and the dividing lines broader as we approach the end of the group.

There are still one or two other varieties which might have been mentioned, but the differences that distinguish them from those given below are so slight that it is not worth while to include them as separate types. A case in point is referred to in note 41. The general characteristics of the period are the long hair of the Sphinx and the small size and irregular position of the amphora.

The most important of the known types to be noted in this period are as follows:

14. *Obv.*—Sphinx of refined archaic style seated l.; body lean; wing curled; hair in queue; further foreleg showing well in front of nearer in rough perspective. Around wreath of olive(?).

Rev.—Quartered incuse square divided by narrow bars into deep compartments; punch-struck.

At. $\frac{18.00}{14.00}$ mm. 122.3 grains (7.93 grammes). Chian didrachm. No. 678, Ward Coll., Municipal Museum, New York. [Pl. II. 1.]

$\frac{19.00}{14.50}$ mm. 121.8 grains (7.90 grammes). Chian didrachm. Cabinet de France.

$\frac{17.00}{13.75}$ mm. 118.8 grains (7.70 grammes). Chian didrachm. My collection.

Not rare.

15. *Obv.*—Sphinx of archaic style seated l.; coarse work; wing curled; hair apparently in long ringlets; further foreleg outlined behind nearer.

Rev.—Quartered incuse square divided by moderately narrow bars into shallowish compartments; punch-struck.

A. 17.50 mm. 121.2 grains (7.86 grammes). Chian didrachm. Athens Cabinet. [Pl. II. 2.]

$\frac{20.00}{15.25}$ mm. 119.6 grains (7.75 grammes). Chian didrachm. Cabinet de France, No. 4969.

16. *Obv.*—Sphinx of unusually large size and refined archaic style seated l. on plain exergual line; wing slightly curled; hair long; further foreleg outlined behind nearer; before its feet vase without handles on first specimen, and squat amphora on second.

Rev.—Quartered incuse square divided by narrow bars into deep compartments; punch-struck.

A. $\frac{17.25}{15.50}$ mm. 119.45 grains (7.74 grammes). Chian didrachm. Berlin Cabinet ex Coll. Philipsen, No. 2243 Hirsch's Cat., 1909. [Pl. II. 3.]

$\frac{19.75}{15.00}$ mm. 118.65 grains (7.69 grammes). Chian didrachm. Cabinet de France, No. 4968^a.

17. *Obv.*—Sphinx of refined archaic style seated l. on plain exergual line; wing curled in naturalistic manner; hair long; further foreleg outlined behind nearer. In field l. small amphora with ball at point.

Rev.—Quartered incuse square divided by narrow bars into three very deep and one shallow compartment; punch-struck.

A. 17.00 mm. 122.4 grains (7.94 grammes). Chian didrachm. Brit. Mus., No. 2, Cat. Ionia, Chios. [Pl. II. 4.]

17.25 mm. 121.8 grains (7.90 grammes). Chian didrachm. Cabinet de France ex Coll. Luynes, No. 4966.

17.00 mm. 121.8 grains (7.90 grammes). Chian didrachm. Athens Cabinet.

Common.

18. *Obv.*—Sphinx of refined archaic style seated l. on thick exergual line; wing curled; hair in queue; further foreleg showing behind nearer in good

perspective. In field 1. small amphora with rounded handles, and ball at point. The whole on circular raised shield with olive (?) wreath around.

Rev.—Quartered incuse square divided by narrow bars into deep compartments; punch-struck.

- At.* $\frac{17.00}{14.75}$ mm. 120 grains (7.78 grammes). Chian didrachm. Coll. J. R. McClean, Fitzwilliam Museum, Cambridge. [Pl. II. 5.]
 17.50 mm. 118.8 grains (7.70 grammes). Chian didrachm. Cabinet de France, No. 4963.
 17.50 mm. 121.8 grains (7.90 grammes). Chian didrachm. My collection.
 Fairly common.

19. *Obv.*—Sphinx of refined archaic style seated l. on plain exergual line, wearing stephane and hair long; wing curled in naturalistic manner; further foreleg outlined behind nearer. Before its feet small amphora with ball at point.

Rev.—Quartered incuse square divided by broadish bars into irregularly shaped and moderately deep compartments; punch-struck.

- At.* $\frac{21.75}{13.50}$ mm. 122.25 grains (7.93 grammes). Chian didrachm. Coll. R. Jameson, Cat. No. 1521, ex Delbeke Coll., No. 195; Sotheby's Cat., 1907. [Pl. II. 6.]
 $\frac{19.00}{12.50}$ mm. 119.4 grains (7.74 grammes). Chian didrachm. Municipal Museum, New York, No. 679, Ward Coll.
 $\frac{16.50}{12.00}$ mm. 121.35 grains (7.87 grammes). Chian didrachm. My collection.
 Common.

20. *Obv.*—Sphinx of refined archaic style seated l. on plain exergual line; wing curled in naturalistic manner; hair long; further foreleg showing almost fully behind nearer. In field 1. amphora with ball at point. The whole in vine-wreath.

Rev.—Quartered incuse square divided by moderately narrow bars into compartments of irregular depth; punch-struck. In the three deepest depressions the letters **XIO**.

A. $\frac{19.00}{13.00}$ mm. 121.8 grains (7.90 grammes). Chian didrachm. Cabinet de France, No. 4962. [Pl. II. 7.]

17.00 mm. 120 grains (7.78 grammes). Chian didrachm. Coll. R. Jameson ex Taranto find, *Rev. Num.*, 1912, Pl. iii. 7. [Pl. II. 8.]

21. *Obv.*—Sphinx of small size and refined archaic style seated l. on plain exergual line; wing curled; hair in queue; further foreleg outlined behind nearer. Before it amphora on ground line with ball at point, and lines forming handles turned back over mouth.

Rev.—Quartered incuse square divided by moderately narrow bars into shallow compartments; punch-struck.

A. 16.25 mm. 119.75 grains (7.76 grammes). Chian didrachm. Berlin Cabinet ex Coll. C. R. Fox, 1873. [Pl. II. 9.]

16.00 mm. 118.8 grains (7.70 grammes). Chian didrachm. Athens Cabinet.

17.00 mm. 122.2 grains (7.79 grammes). Chian didrachm. Museum of Fine Arts, Boston, Mass., U. S. A., ex Warren Coll., No. 1139 of Regling's Cat.

Rare.

22. *Obv.*—Sphinx as preceding, but type arranged on raised circular shield.

Rev.—Quartered incuse square divided by broad bars into roughly shaped shallow compartments; punch-struck.

A. 16.50 mm. 118.5 grains (7.68 grammes). Chian didrachm. Museum of Fine Arts, Boston, Mass., U. S. A. From Naukratis, through Egyptian Exploration Fund.

No. 14. It is not absolutely certain whether there is an amphora or not before the Sphinx on coins of this type, although there is no sign of it on any of the three pieces here described. The question must be considered to be still *sub judice*, however, as indications are to be observed on two specimens at Berlin that suggest an amphora.

In any case I think that it is as well to place the type at the beginning of this group on account of the resemblance it bears to No. 13, although inferior as a work of art. The same trick of representing the Sphinx with its hind legs half bent, as if in the act of rising, may be noticed in both. It is also, on the whole, the most archaic looking of all the types assembled under this period. It is difficult, too, to be positive about the composition of the wreath. Ivy or vine-leaves were certainly to have been expected, but there may have been some reason for using an olive-wreath which the design suggests more than anything else.

No. 15. This seems to be a rare type, and the two coins cited are the only specimens I have seen. They are both from the same dies. The type is remarkable for its unusually rough execution, although it shows the earliest signs of that massiveness in the bodily forms of the Sphinx which characterizes many of the subsequent issues.

There is no doubt here about the absence of any amphora.

No. 16 is a very difficult coin to attribute. The style and execution are good, and the weight being Chian there seems no reason to discredit its right to a place among the island's issues. But the vase-shaped

vessel in place of an amphora is enough to have raised doubts as to this among some authorities. The absence of handles, in my opinion, is most likely due to careless engraving or a damaged die, as the Paris specimen, while certainly belonging to the same issue, though from a different obverse die, shows a similarly shaped vessel with handles.

This type also seems rare, and has never been published.

No. 17 is probably the most familiar of these sixth-century types. Apart from the doubtful case presented by No. 14, it may be said to record the earliest appearance of the real amphora on coins of Chios. The specimen from Athens also seems to furnish us with the first instance of the letters $\chi\iota\omicron\zeta$ in the depression of the incuse square. The undoubted occurrence of these letters on later issues will be found referred to below. Although a transient feature of the coinage, it is a fact that has not hitherto been established.

No. 18 seems to be modelled upon No. 14, although clearly of slightly later date. It is interesting as being the first issue to show the raised circular shield, as a background for the type, which later became an unfailing feature of the island's money. This convex field may not have been intentional at first, although it certainly became so afterwards, but its appearance here is an instance of the fact that what are so often taken for innovations in coins are frequently only revivals.

Another well-known instance of this is the crescent on the reverse of Athenian tetradrachms, supposed at one time to have been first used on coins of the third period according to the British Museum Catalogue (see

Attica, Pl. iii. 3-5), but now known from the Taranto find to have originated much earlier (*Rev. Num.*, June 1911, Nos. 14 and 15, Pl. i. 11 and 12).

No. 19. This is another common type. The issue is noticeable for its oval flans, and for the rough form of incuse. The quartering lines or bars become really broad now for the first time.

No. 20. This highly finished type has been brought into prominence by M. Babelon's description of the Taranto find (*Rev. Num.*, June 1911, Pl. iii. 7), and provides us with one of the few fixed points that we possess for the dating of Chian coins. The evidence of the hoard indicates that none of the coins contained in it were struck later than 510 B.C. This issue may, therefore, be safely assigned to a period some ten or twelve years prior to the Ionian Revolt. On grounds of style it may confidently be placed later than the five types already described here, and for reasons given below the two succeeding ones, Nos. 21 and 22 must probably have followed it.

On account of the interest and rarity of the type I am illustrating both the specimens described. They are the only ones known to me, and moreover they supplement one another in their details. It will be noted that the obverse dies are different, but the same reverse die has been used for both pieces. The Bibliothèque specimen is probably the later of the two as the letters in the depressions of the incuse, which are undoubted on this case, are more difficult to distinguish than on M. Jameson's coin. At no time do they show up well on being reproduced.

No. 21. We have now reached a stage in the evolution of the Chian didrachm that approximates very

closely to the fully developed fifth-century type. While still showing unmistakable signs of the archaic period of art in the treatment of the features of the Sphinx, and in its long hair, this coin will at once be recognized as the most advanced of those so far described.

It presents, moreover, an apparently unimportant point of resemblance to the fifth-century coins that constitutes a certain link with them. I refer to the fact that the lines composing the handles of the amphora are continued after touching the lip and bent back in opposite directions over the mouth of the vessel. This I take to be a rough method of representing an amphora closed with a stopper, which is the way in which the amphora is invariably represented during the period of early fine art, and was only relinquished when more careless work was introduced just before the opening of the Peloponnesian war.

It is mainly owing to this small detail that I venture to assign this and the succeeding type to the period between *circa* 512 B.C., marked by the unstoppered amphora-type No. 20, and the Ionian Revolt.

No. 22 is a unique variety of the last in which the raised circular shield appears again. The reverse of the type is indistinguishable from those seen on the fifth-century coins, thus bringing the development still one step nearer to that oft-mentioned goal.⁴¹

⁴¹ There is an archaic didrachm in Sir H. Weber's collection of similar style to the later coins of this group, but with an amphora stoppered as on the fifth-century pieces. It may be a little later than No. 22, and again it may be another case where a feature, common in later times, has appeared once and then been discarded for a period. See remarks under No. 18, above.

Before leaving this period it will be as well just to mention the small pieces bearing a Sphinx in various positions on the obverse, and different types on the reverse, which, from their style, may all be said to belong to the sixth century. M. Babelon has suggested (*Traité*, vol. ii, p. 1134) that these coins may be alliance pieces between Chios and some of the neighbouring cities. If we could be sure of this the coins in question ought to find their place here, but considering the uncertainty that attends the question of these double-typed coins, I prefer not to go into it any further.⁴²

None of the coins are of the Chian standard, and the style of all, with the exception of one bearing a Gorgoneion on the reverse (*Num. Chron.*, 1913, p. 268, Pl. xiii. 9), is very unlike that of any known Chian issue.

PERIOD IV. 500-478 B.C.

With the outbreak of the revolt, as mentioned above, the tyrant Strattis was deposed, and the oligarchy was restored in Chios under magistrates called *στρατηγοί*. It is in the highest degree probable that this revival of the civic power was signalized in all the states of the League by fresh issues of electrum coins.

The staters of various types, but similar fabric, to which Head first drew attention (*Num. Chron.*, 1887, p. 281), are now generally recognized as the coinage of the Ionian Revolt. The papers already referred to by Prof. P. Gardner and M. R. Jameson independently pointed to this event as the most likely source of the

⁴² See above, p. 7, where attention is drawn to a note under "Miscellanea" in *Num. Chron.*, 1913, giving all the facts relating to these doubtful coins.

issue. It is a highly plausible theory, and as satisfactory as such things well can be. The chief point of interest for the present inquiry is the share that Chios may have had in this federal coinage.

All the coins forming the group in question have one feature in common, to wit, the type of their reverse. This consists of a shallow incuse square neatly quartered by fine lines, and anvil-struck.⁴³

The stater attributed by M. Jameson to Priene (*Trouvaille de Vourla*, Pl. i. 4) differs from the rest in having no cross-lines in the incuse square, but this may be due, as he suggests, to a damaged die. Then the specimen with the Free Horse, attributed to Cyme (No. 7 of Prof. Gardner's list, *Journ. Hellen. Studies*, 1911), seems also to be an exception on account of its punch-striking. But it can, I think, be shown to be too old for the period suggested, like its Chian companion. In her "Electrum Coinage of Lampsakos", Miss A. Baldwin illustrates a more probable candidate with the characteristic reverse, which quite satisfies the conditions. It will also be seen from this paper that Miss Baldwin, who gives the whole history of the question, pp. 27-32, agrees with M. Jameson's choice of the coin to be ascribed to Chios at this juncture.

In his description of the Vourla find (*Rev. Num.*, 1911, pp. 67-8) M. Jameson pointed out that a Chian stater showing this reverse had appeared at the sale of the Lambros collection (No. 701, Hirsch's Cat., 1910), and he subsequently assigned it to the date 500 B.C. (Cat. Jameson, No. 1520^a).

⁴³ See Earle-Fox, "Early Coinage of European Greece," *Corolla Numismatica*, p. 34.

Not only does this type justify its attribution from all points of view connected with style and fabric, but it is the only extant type to do so in my opinion. The stater described above under No. 5, which was selected by Prof. Gardner for this purpose in his "Gold Coinage of Asia", has since been rejected by him as of too early date. Then the coin which he chose to take its place in his subsequent paper, "The Coinage of the Ionian Revolt," is most probably a forgery, and I have purposely refrained from publishing it here. And finally, the only Chian stater in the Vourla find (type No. 6 of the present arrangement), which consisted, otherwise, of coins now regarded as contemporaneous with the Ionian Revolt, is also acknowledged by M. R. Jameson to belong to an earlier issue.

A point to which, I think, hardly enough attention has been given is this very question of the reverse employed for the issue under discussion. All writers on the subject agree that the various members of this coin-group exhibit the same reverse, and the apparent exceptions to this have already been examined above.

Though the suggestion put forward by Six (*Num. Chron.*, 1890, p. 219) that Chios was the place of mintage of all these coins need no longer be seriously entertained, there is no denying the fact that they bear a strong family resemblance to one another both in style, fabric, and gold contents.

But the fabric is not that of the Chian mint. I would go further and say that, if a common mint be postulated, then it must be some other city of the League and not Chios. The probability, however, is that each member struck its own share of the issue

after agreeing to follow some general rule for the preservation of uniformity.

If so, then Chios departed, for the time being and so far as regards the reverse, from the hitherto unbroken tradition of her mint. It will be noticed from the foregoing descriptions that all the island's coins, from the earliest times to the date at which we have now arrived, are what is known as punch-struck.

This, judging from the very earliest electrum pieces, seems to have been the original method of coinage. But, at a comparatively early date, the rival method of anvil-striking, of which the Aeginetic coinage is the most familiar type, came into use as well, and the two were pursued concurrently in different states. For instance, in the case of electrum previous to 550 B. C., coins attributed to Ephesus, Erythrae, Miletus, Samos, and Chios, show the punch-striking method. There are some that do not, but they are of doubtful origin. For silver previous to and shortly after 500 B. C. Miletus and Chios are alone among the Ionian states in employing punch-striking. In other words they were more conservative. The coins of all the rest, Clazomenae, Colophon, Ephesus, Erythrae, Phocaea, Teos, and Samos, are invariably anvil-struck.⁴⁴

It is clear then that, though Miletus and Chios were the leading states in the Revolt, and set the weight-standard for the federal coinage, some other city or cities provided the model.

⁴⁴ *Brit. Mus. Cat., Ionia*, Pl. vi, viii, ix, xv, xxiii, xxx, and xxxiv. It will be noticed that when once the method of striking was changed, as in the case of Ephesus, Erythrae, and Samos, it was applied generally to all subsequent issues, at any rate until a reverse type was introduced. After that the question is more difficult to decide.

On this ground alone the issue of Chios next to be described stands out among all her other electrum coins as an unusual product of her mint, and helps to prove that the coinage of which it evidently formed part was the outcome of peculiar circumstances.

So far there has been no evidence of any silver issue that could be looked upon as contemporary with the Chian Revolt staters. The Vourla find seems to have proved that Clazomenae issued divisional pieces in silver to accompany her staters, and it has been shown that Lampsacus at least among the other cities did the same.⁴⁵ On the other hand the tetrobols, that Prof. Gardner suggests for Chios, are unquestionably of later date.

The electrum stater proposed for the period of the Ionian Revolt is the following:

23. *Obv.*—Sphinx of strong archaic style seated r.; wing curled in naturalistic manner; she wears stephane, round ear-ring, and hair long on neck with a separate conventionalized lock rising from crown of head and terminating in a tendril-like spiral; the further forepaw is raised and grasps a lotus-flower(?). The tail bears a tuft.

Rev.—Quartered incuse square divided by fine bars into shallow compartments; anvil-struck.

El. $\frac{21.50}{18.50}$ mm. 217.3 grains (14.08 grammes). Milesian stater. Coll. R. Jameson, Cat. No. 1520^a, ex Lambros Coll., No. 701, Hirsch's Cat., 1910. [Pl. II. 10.]

19.00 mm. 215.9 grains (13.99 grammes). Milesian stater. Boston Museum, Regling, Sammlung Warren, No. 1736, Taf. xxxvii.

19.50 mm. 214.5 grains (13.90 grammes). Milesian stater. Munich Cabinet.

⁴⁵ P. Gardner, "Coinage of Ionian Revolt," *J. H. S.*, 1911, p. 157, and Miss Baldwin, *op. cit.*, p. 19.

It will be observed that, in addition to the unusual reverse, this coin has a much flatter flan than any other electrum stater of Chios. The work is archaistic; and the revival of the conventionalized lock of hair at this moment of national crisis is most interesting, this being its last appearance on the coinage. On the other hand the treatment of the wing betrays the freer style that art had attained by this date, and connects the coin with didrachms Nos. 19-20. The stephane also had not been seen on anything earlier than the former of these two coins. The lotus-flower is not quite distinct, but it seems a more likely object—judging from this stater's predecessors—than the "little club", by which term it is customary to describe it.

It is unnecessary to recapitulate here the well-known story of the Revolt, and the prominent part played in it by Chios, but the events subsequent to the terrible vengeance wreaked upon the island by Persia after the battle of Lade are not quite so familiar.

There seems to be no doubt but that the population was swept together as in a net,⁴⁶ and deported wholesale, leaving nothing behind but ruined temples and ravaged vineyards. This took place about one year after the battle of Lade, say in 493 B.C. But the exile did not last long, for in this same year Artaphernes granted a constitution to the Ionians, and the inhabitants of Chios began to return. An opportunity was soon found for the restoration of their old tyrant Strattis,⁴⁷ under whom the island remained faithful to Persia longer than some of its neighbours, and actually sided with Xerxes against Greece.

The battle of Salamis caused the national or aristocratic party to revive, and an attempt was made to

⁴⁶ Herodotus vi. 31.

⁴⁷ *Ibid.* viii. 122.

assassinate Strattis. Though this failed, it was the indirect cause of the expedition of Leotychides and the battle of Mycale. That echo from Plataea effectually strengthened the hands of the oligarchy, and Strattis disappears from history for the last time.

It has been suggested that the destruction caused by the Persians' raid must have been so great that Chios can have been in no condition to coin money for a considerable time. This barren period has generally been held to extend over the fifteen years between the battles of Lade and Mycale. But the fact that the inhabitants came back so soon after their exile has, I think, been overlooked. Strattis and his Medizing party seem to have had nearly the whole of the above-mentioned period in which to rebuild the fortunes of the state. And though they may not have done much, it does not seem unreasonable to suppose that some coins were struck as a mark of their return to power.

So far, however, it must be admitted that we cannot assign any particular issue to this period. It may be that types approximating to Nos. 21 and 22, perhaps even No. 22 itself, belong here, or that the earliest coins with a bunch of grapes above the amphora were now struck for the first time. But it is too fine a point to be settled by anything other than a luckily constituted find. It is safest, on the whole, to leave all coins with an amphora only, as has been done here, to the period before the Ionian Revolt; and to assume that the bunch of grapes was not introduced till after the battle of Mycale.

J. MAVROGORDATO.

(To be continued).

II.

QUAESTIONES CYRENAICAE.

(SEE PLATES III-VI.)

THE numismatics of the Cyrenaica¹ have been exhaustively treated by L. Müller in the first volume of his great *Numismatique de l'ancienne Afrique*,² and any later study of the same field must necessarily base itself upon his results, which in their broad outline remain unshaken. Since he wrote, however, fresh material has rapidly accumulated, and I think it is now possible to define the chronological limits of the various issues more closely, and in some cases to clear up their historical relations. The coinage falls naturally into five periods. The first period (c. 570-c. 480) comprises a number of

¹ I desire here to express my thanks, for their kind provision of casts or other information, to the following scholars: the Directors and staff of the Cabinets of Paris, Brussels, Berlin, Copenhagen, Athens, Gotha, Karlsruhe, Glasgow (the Hunterian Museum), Cambridge (the Fitzwilliam Museum), Boston (U.S.A.); also to Sir Hermann Weber, Dr. F. Imhoof-Blumer, Messrs. Giesecke, Gwinner, E. T. Newell, and Baldwin; and especially to the Keeper of the Department of Coins and Medals in the British Museum, both for his constant help in discussing points as they arose, and for his care in seeing this article through the press. [The Editors desire to acknowledge the kind assistance of Dr. George Macdonald in reading the proofs of this article, which Mr. Robinson has been unable to revise owing to his absence on military service.]

² Cited henceforth as M. i, with Supplement as Suppl.; individual coins published by him are cited under the numbers he gives them, e.g. M. i, 52, &c.

types of great variety and interest. In the second period, which lasts till a few years after the fall of the Battiads (c. 480-c. 435), the types have become fixed, the head of Ammon and the silphium plant appearing on almost every coin. The third period (c. 435-c. 308) is marked by the completion of a change in weight-standard already begun in the sixth century, and, in a little while, by a plentiful gold coinage. The fourth period embraces the series struck in dependence, real or nominal, on the Ptolemies. Lastly, into the fifth period fall the coins issued under Roman suzerainty or jurisdiction.

FIRST PERIOD.

For the first period we have what is practically a Corpus in Babelon's *Traité des monnaies grecques et romaines*, 2^{ième} partie, T. i, pp. 1336-1363.³ With one exception⁴ no inscriptions have hitherto been noted on coins of this period, and attribution to the various cities, when it has been attempted, has been based on the vague indication of types. There are, however, apart from the coins of Euesperides⁵—of which the earliest, inscribed **EYEX**, falls at the end of this period—at least three archaic tetradrachms bearing inscriptions.

1. *Obv.*—Silphium plant with two whorls and three umbels, one springing on either side from the bases of the lower whorl, and the third crowning the stem; [on either side, silphium fruit?].

³ Cited as *Tr.*, individual coins cited under their numbers, e.g. *Tr.* 2012, &c.

⁴ No. 1, below.

These are discussed below, Nos. 23-8.

Rev.—Gazelle standing on dotted line l.; in field above, silphium plant in pericarp, with button in cleft, point upwards; to l., silphium plant with one pair of leaves and one umbel, above which, K; beneath gazelle's belly, K; all in incuse square.

A. 0.9. Wt. 264.4 grs. B. M. *Num. Chr.*, 1861, p. 201.

1 A. *Obv.*—Similar; arrangement of whorls varied; on either side of base, a silphium fruit.

Rev.—Similar, but silphium plant has two whorls and two umbels exactly as on obverse; beneath gazelle's belly, π .

A. 0.9. Wt. 259.3 grs. Paris = *Tr.* 2012, Pl. lxiv. 11 = M. i. 24.

The latter coin has already been published by Babelon in his *Traité*. There the letter beneath the belly of the gazelle is called (following Müller) "objet incertain". A comparison with the coin in the British Museum, however, suffices to show that though lying on its back⁶ it is the same letter as appears on No. 1. Whether there was a second K on the reverse of No. 1 A is uncertain; certainly there would not be room for it in the same place as on No. 1, for the silphium on the reverse of No. 1 A is much taller, reaching right up to the chin of the gazelle. There would, however, possibly be just space for it in the right-hand top corner, which is off the coin—an unfortunate accident, as the inscription is very puzzling. The two letters cannot both form part of the same word, and it is impossible not to recognize one or other as the initial letter of *Kypapaiov*. Poole, who

⁶ Cp. the somewhat later drachm of Euesperides in the Paris Collection, No. 25, below, where the inscription EV on the reverse appears upside down.

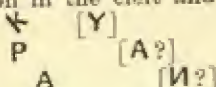
published the B.M.coin,⁷ suggested $\text{K}(\kappa\iota\nu\delta\acute{\nu})\text{K}(\nu\pi\alpha\rho\alpha\iota\acute{\omega}\nu)$, which has little to recommend it. It is true that Herodotus speaks of the $\kappa\iota\nu\delta\acute{\nu}\ \tau\acute{\omega}\nu\ \text{Ἰόνων}$, but Ionia was not a city. In this, as in later times ($\kappa\iota\nu\delta\acute{\nu}\ \tau\acute{\omega}\nu\ \nu\eta\sigma\iota\omega\tau\acute{\omega}\nu$, $\kappa\iota\nu\delta\acute{\nu}\ \text{Κρητῶν}$), the name implies a larger unity than the city state. Would the inhabitants of Barce and Euesperides have been content to be named Κυρηναῖοι ? Even granting the existence at this date of such a $\kappa\iota\nu\delta\acute{\nu}$ embracing the other cities, such an abbreviation as KK which occurs on the Cretan copper of Hadrian and Antoninus (*B. M. C. : Crete*, pp. 5, Nos. 30 seqq.) seems incredible. A similar objection applies to the amplification $\text{K}(\nu\pi\alpha\rho\alpha\iota\acute{\omega}\nu)\text{K}(\delta\acute{\omicron}\mu\mu\alpha)$, on the analogy of $\Sigma\acute{\epsilon}\upsilon\theta\alpha\ \kappa\acute{\omicron}\delta\mu\mu\alpha$, even although the contemporary support from Crete of $\Gamma\acute{\omicron}\rho\tau\upsilon\nu\omicron\varsigma$ or $\Phi\alpha\iota\sigma\tau\iota\lambda\omicron\nu\ \tau\acute{\omicron}\delta\ \pi\alpha\iota\mu\alpha$ ⁸ might be adduced. That the second K might be a "mint mark" is not probable on so early a coin, but that it is possible is shown by the contemporary tetradrachms of Messene in Sicily.⁹ On the whole, seeing that both letters are kappas and that one of them is probably wanting on the Paris specimen, perhaps the most satisfactory solution is to take *both* as the initial of Κυρηναῖον , regarding the repetition as simply a device to fill up the empty field according to the custom of early art. The very decorative nature of the letter lends colour to this theory, which would also explain the absence of a second letter on the Paris coin where the space is occupied by an extra pair of silphium leaves.

⁷ *Num. Chron.*, 1861, p. 201.

⁸ Head, *Hist. Num.*, pp. 465 and 472. The numismatic connexion between Crete and Cyrene is often very close.

⁹ Hill in *Num. Chron.*, 1913, pp. 100-1. Cp. also coins of Barce, below, Nos. 19, 20.

2. *Obv.*—Silphium plant with two whorls and three umbels, arranged as on No. 1; in field to l. and r. a silphium fruit in pericarp with a button in the cleft and one at the point; around



Rev.—Two dolphins heraldically opposed downwards; between them, silphium fruit in pericarp with point downwards, one button at the point and one in the cleft, from which springs a fleuron; all in incuse square.

Berlin. B. M. Ai. 0.8. Wt. 260 grs. (Cp. *Tr.*, 2002, Pl. lxiv. 1.)

On the Berlin specimen the inscription, as far as the left side is concerned, is quite plain; probably having regard to the symmetrical disposition of the first letters it is to be completed in full as above—though it is very long for so early a coin. The inscription renders certain the attribution to Cyrene, made by Müller¹⁰ on the strength of the passage in Strabo,¹¹ describing (after Eratosthenes) the stelae set up by the Cyrenaean envoys to Ammon.

3. *Obv.*—Silphium plant with two whorls and five umbels, a pair springing from the base of each pair of leaves and one crowning the plant; in field, to l. and r., silphium fruit.

Rev.—Bull standing r.; behind, palm-tree; in lower right-hand corner, Θ; all in incuse square.

Ai. 0.9. Wt. 262.3 grs. B. M. (also Coll. Jameson, No. 1347, Pl. lxix, and Fitzwilliam Museum, Cambridge).

¹⁰ *ib.* p. 17.

¹¹ *Strabo* (Teubner) i. 49 καὶ ἐπὶ στελεαδίων ἀνακισθαι δελφίνας ἐπιγραφὴν ἔχοντας Κυρηναίων θιωρῶν. It can hardly be meant—though it has generally been so understood (*e.g.* by Müller, *l.c.*, and Babelon, *Tr.*, p. 1351)—that this is the actual inscription. At least we should have expected the Doric form Κυρηναίων.

There is no reason why the Θ (which unfortunately does not appear on the Jameson specimen) should not be the first letter of **BAPKAION**. The coin would then be parallel with No. 1, which also shows the initial only, and that likewise on the reverse, not the obverse. This would then be the earliest coin attributable to Barce. The type is interesting as well for its own sake,—it does not occur otherwise in the Cyrenaic series,—as for the anticipation of the design of later Carthaginian coins. The attribution of this coin with the bull to Barce raises the further question whether the following coin should not be assigned to the same city.

4. *Obv.*—Silphium fruit in pericarp; in the cleft and at the point, a button.

Rev.—Bull's head facing.

Attic hemidrachm. Paris, wt. 32 grs., and Berlin (29.3 grs.). *Al.* 0.5. (*Tr.* 2006, Pl. lxiv, 5.)

5. *Obv.*—Silphium with three whorls and five umbels, a pair springing from the bases of the two lower whorls and a single one crowning the plant; in field r., above, lion's head l. with open jaws and dotted truncation, and below, silphium seed with point upwards.

Rev.—Eagle's head r. with dotted truncation, holding snake in beak; in r. top corner, floral volute; all in dotted square; incuse square.

B. M. *Al.* 0.9. Wt. 265.4 grs. (= *Tr.* 2005.)

This coin has been often published, but in view of the historical references which have been read into it, it may be worth while attempting to define its date more accurately. Babelon,¹² maintaining that the lion's

¹² Babelon, *Tr.*, p. 1354 (following Head, *Hist. Num.*, p. 727); *Rev. Num.*, 1894, pp. 274 seqq.

head is similar to that on coins of Samos, and the reverse type to the coins of Ialysus, brings the piece into relation with the expedition which Arcesilas III launched from Samos towards 528 to recover his kingdom, and assumes that Rhodes as well as Samos was his recruiting ground.¹³ The lion's scalp facing is certainly a distinctively Samian type, but the lion's head in profile suggests south-western Asia Minor, and the style of the two coins bearing it, figured in the *Traité*, Pl. xi. 26 and 27¹⁴ as Samian, should surely lead us with Six¹⁵ to place them in that district. Why too should the engraver, if he wished to refer to Samos, choose a type which, even granting that the coins just referred to are Samian, is quite isolated in that series, instead of the familiar facing lion's scalp with which the series¹⁶ begins and continues. Head¹⁷ has already suggested that the lion's head is borrowed from Lindus. We know that a contingent of Lindians under the sons of Panchis took part in the second colonization of Cyrene under Battus II shortly before 570,¹⁸ and this lends added weight to Head's suggestion. At any rate all connexion with Samos vanishes, and there is no mention of any place save Samos in Herodotus's account of the return of Arcesilas.¹⁹

¹³ *Ibid.*, p. 290, "Rhodes et Samos, les deux îles où Arcésilas recrute son armée."

¹⁴ = *B. M. C.*, p. 352, Nos. 23 and 27.

¹⁵ *Num. Chron.*, 1890, p. 240.

¹⁶ The fact that the earliest coins with lion's scalp (*Traité, ibid.*, pp. 443 seqq.) are earlier than the two coins in question makes their isolation more prominent.

¹⁷ *Num. Chron.*, 1891, p. 4, followed by Ch. Blinkenberg, "La Chronique du Temple Lindien," p. 439.

¹⁸ Inscriptions in Blinkenberg, *op. cit.*, p. 329, xvii, and his comments, p. 353.

¹⁹ iv. 162, 163.

A stylistic comparison shows that the lion's head on the coin of Cyrene is later than the staters of Lindus of the first period. It offers perhaps most analogy to the tetrobols of the second period (after 500 B.C.), for example *B.M.C.: Caria*, p. 229, Nos. 9 and 10, with the dotted truncation at the neck, and a very similar treatment of the "ruff". Again, the coins of Ialysus which suggested the reverse type²⁰ are later than the earliest coins of the other cities of Rhodes which have a type on only one side. They cannot be put much before the beginning of the fifth century, to which period they are assigned by Head (*B.M.C.: Caria*, p. 226), for Babelon's earlier date (c. 530) rests ultimately on the assumption that our No. 5 was struck by Arcesilas III. Thus the arguments from style and from origin of types both alike compel us to place this coin after 500, and so reinforce the other arguments against its connexion with Arcesilas III and his expedition, c. 530.

Traces of Rhodian influence are also visible on the following piece.

6. *Obv.*—Head of lioness facing; above, silphium fruit, point upwards; dotted border.

Rev.—Head of griffin r. in dotted square; incuse square.

B. M. AR. 9-65. Wt. 60.8 grs. (*Tr.* 2008.)

In connexion with this coin may be considered two coins of Camirus.

7. *Obv.*—Fig-leaf.

Rev.—[Head of griffin l. in incuse square.]

²⁰ On the staters the eagle has no snake in his beak; this feature, however, appears on the hemidrachm. *Traité, ibid.*, p. 467, No. 765, Pl. xx. 11. Cf. *Rev. Num.*, 1894, pp. 274 seqq.

El. 0.3. Wt. 8.1 grs. (*B. M. C.: Caria*, p. 223, No. 1, where the *rev.* is described as "incuse square within which a deeper small incuse depression".) On a specimen in Sir Hermann Weber's collection the griffin's head is quite plain.

8. *Obv.*—Rose.

Rev.—KA; griffin's head l.

Al. 0.4. Wt. 18.3 grs. [*B. M. C.: ibid.*, 13.]

No. 8 has been attributed by Imhoof to Karpathos or Kasos,²¹ because neither obverse nor reverse type was known at Camirus; but the reverse of No. 7 deprives this argument of its force.

On a general review of the first period it will be noted that the coins fall into two classes, the one without, the other with a type in the incuse of the reverse; further, that in the first class the standard used for all denominations is the Attic, while in the second another standard giving a drachm of 53.4 grs. is employed for smaller denominations, side by side with the Attic, which it gradually displaces.²² The nature of this new standard is puzzling; in its later embodiments it has been lightly called "Asiatic" or Phoenician, which is obviously unsatisfactory. Regling²³ avoids the difficulty by describing the later coins as "Tetradrachmen eigenen Systems?".

It is not here proposed to discuss the origin of the new standard, but it is worth while roughly

²¹ *Monnaies grecques*, p. 321.

²² In the second period Attic subdivisions of the tetradrachm are practically non-existent (a didrachm in the British Museum, and an obol in Paris, both of Cyrene, are the only ones known to me). In the third period the tetradrachm itself is supplanted.

²³ *Sammlung Warren*, p. 213; though he calls the earlier drachms of the same standard Phoenician.

A stylistic comparison shows that the lion's head on the coin of Cyrene is later than the staters of Lindus of the first period. It offers perhaps most analogy to the tetrobols of the second period (after 500 B.C.), for example *B.M.C.: Caria*, p. 229, Nos. 9 and 10, with the dotted truncation at the neck, and a very similar treatment of the "ruff". Again, the coins of Ialysus which suggested the reverse type²⁰ are later than the earliest coins of the other cities of Rhodes which have a type on only one side. They cannot be put much before the beginning of the fifth century, to which period they are assigned by Head (*B.M.C.: Caria*, p. 226), for Babelon's earlier date (c. 530) rests ultimately on the assumption that our No. 5 was struck by Arcesilas III. Thus the arguments from style and from origin of types both alike compel us to place this coin after 500, and so reinforce the other arguments against its connexion with Arcesilas III and his expedition, c. 530.

Traces of Rhodian influence are also visible on the following piece.

6. *Obv.*—Head of lioness facing; above, silphium fruit, point upwards; dotted border.

Rev.—Head of griffin r. in dotted square; incuse square.

B. M. AR. 0.65. Wt. 60.8 grs. (*Tr.* 2008.)

In connexion with this coin may be considered two coins of Camirus.

7. *Obv.*—Fig-leaf.

Rev.—[Head of griffin l. in incuse square.]

²⁰ On the staters the eagle has no snake in his beak; this feature, however, appears on the hemidrachm. *Traité, ibid.*, p. 467, No. 765, Pl. xx. 11. Cf. *Rev. Num.*, 1894, pp. 274 seqq.

El. 0-3. Wt. 8.1 grs. (*B. M. C.: Caria*, p. 223, No. 1, where the *rev.* is described as "incuse square within which a deeper small incuse depression".) On a specimen in Sir Hermann Weber's collection the griffin's head is quite plain.

8. *Obv.*—Rose.

Rev.—KA; griffin's head l.

Ar. 0-4. Wt. 18.3 grs. [*B. M. C.: ibid.*, 13.]

No. 8 has been attributed by Imhoof to Karpathos or Kasos,²¹ because neither obverse nor reverse type was known at Camirus; but the reverse of No. 7 deprives this argument of its force.

On a general review of the first period it will be noted that the coins fall into two classes, the one without, the other with a type in the incuse of the reverse; further, that in the first class the standard used for all denominations is the Attic, while in the second another standard giving a drachm of 53-4 grs. is employed for smaller denominations, side by side with the Attic, which it gradually displaces.²² The nature of this new standard is puzzling; in its later embodiments it has been lightly called "Asiatic" or Phoenician, which is obviously unsatisfactory. Regling²³ avoids the difficulty by describing the later coins as "Tetradrachmen eigenen Systems?".

It is not here proposed to discuss the origin of the new standard, but it is worth while roughly

²¹ *Monnaies grecques*, p. 321.

²² In the second period Attic subdivisions of the tetradrachm are practically non-existent (a didrachm in the British Museum, and an obol in Paris, both of Cyrene, are the only ones known to me). In the third period the tetradrachm itself is supplanted.

²³ *Sammlung Warren*, p. 213; though he calls the earlier drachms of the same standard Phoenician.

to determine the date of its introduction if we can. The same standard appears at two other places, Samos²⁴ and Ephesus. At Samos it is an innovation of the beginning of the fifth century, and is accompanied by a further innovation in the form of a reverse type.²⁵ The earliest coins which can with certainty be assigned to this island have no reverse type and are of a different standard.²⁶ At Ephesus, if we accept the attribution of the pieces with a crawling bee seen in profile,²⁷ the standard appears towards the end of the second half of the sixth century, under Persian rule; if we reject it, the first coins of such a weight are those with the usual Ephesian types given to the opening years of the fifth century.²⁸ We shall not be far wrong, then, if we place the first appearance in S.W. Asia Minor of this standard (whatever its origin) in the last years of the sixth century, and in view of the close connexion of this district (and especially Samos) with Cyrene we may infer that the same years saw its first appearance in Africa as well.

This brings us to another question, the approximate date of the introduction of a reverse type into the incuse of the earliest coins. Of the districts connected

²⁴ Where in later times its tetradrachms were so thoroughly established as to have acquired the name of *arratip mirpos* (*Hist. Num.*², p. 683, and reference there given).

²⁵ *Traité*, 2^dème partie, I, p. 283, No. 449 seqq. The style of these coins and the fact of their having a reverse type seems to preclude Babelon's attribution of them to Polycrates.

²⁶ *Ibid.*, p. 278, No. 443 seqq. These cannot be much earlier than the last quarter of the sixth century.

²⁷ *Ibid.*, p. 274, Nos. 435. 436 bis. Imhoof would give these to Anaphe.

²⁸ *Ibid.*, pp. 437 seqq. and the tetradrachm *B. M. C. : Ionia*, p. 49, No. 205, whose date has been corrected in *Hist. Num.*², p. 572.

with Cyrene, Ionia does not take this step till the fifth century, for the coins of the Ionian revolt have still the plain incuse. In Caria, on the other hand, the change seems to take place earlier; at Cnidus, for example, the head of Aphrodite begins about 550,²⁹ *i. e.* about the same time as the appearance of a reverse type at Athens. On the other hand the cities of Rhodes, with which Cyrene stood in such near relations, are little if at all earlier in making the change than those of Ionia.³⁰ We ought not to be surprised, then, if the reverse type were introduced somewhat later in Cyrene than is generally acknowledged. The closing years of the sixth century may be indicated as the date of this innovation.

A further argument may be drawn from another consideration. We have seen that the introduction of the new standard took place not earlier than the last years of the sixth century, say 525. No coins with a plain incuse are of the new standard;³¹ but the earliest coins of the new standard have very simple types,—one or two silphium seeds on the obverse, and a seed in a square incuse on the reverse. This suggests that the new standard was introduced not long after the reverse type. The evidence from finds is not at all conclusive, but does not contradict

²⁹ *Ibid.*, p. 427, No. 699; the initial dating of these coins (650) in *B. M. C.: Caria and Hist. Num.* seems too early.

³⁰ See above, p. 60.

³¹ The coin published by Sir Hermann Weber in *Num. Chron.*, 1899, p. 286, No. 26, is only an apparent exception. The weight of this piece is 55.5 (*i. e.* above the maximum of the new standard); it is in bad condition and has been re-struck, both of which circumstances would account for some loss of weight, while others of the same class (*Traité*, No. 1980) are obviously of the Attic standard.

such a dating. The find of Myt-Rahineh consisted of archaic coins of the sixth and early fifth centuries, including two Cyrenaic tetradrachms with incuse reverses. Longpérier³² who published it dated its burial c. 525, during the Persian invasion of Egypt. It could not be earlier. The Taranto find³³ contained two Cyrenaic tetradrachms also with incuse reverses. The latest datable coins in the find were a tetradrachm of Chalcis with a Boeotian type (c. 510-507 B. C.), one of Eretria with the gorgoneion and lion's scalp in incuse square (530-480), and one of Peparethus with the grapes and the dolphin rider (c. 480). Thus in two finds buried, say between 525 and 480, no Cyrenaic tetradrachms with reverse types appear. On the other hand, in the goldsmith's hoard from Naucratis,³⁴ of which the latest coin is a Samian tetradrachm, struck after the Athenian conquest of 437, we have two Cyrenaic tetradrachms with reverse types, and none without.

If the beginning of the second class of the first period, containing coins with a type on the reverse, is to be placed in the last quarter of the sixth century, when did the first class begin? This class consists of some ten varieties, the earliest of which, in the French collection,³⁵ is of very rough work. The style of the coin will not let us place it later than the first half of the sixth century. If on the other hand we refer it to the end of the seventh century, we are left with a very small number of pieces to fill the gap of a century or more before the appearance of the later

³² *Rev. Num.*, 1861, p. 425.

³³ *Rev. Num.*, 1912, p. 21.

³⁴ *Num. Chron.*, 1886, p. 9.

³⁵ *Traité*, No. 1973.

coins. Though founded traditionally in 630, Cyrene can have been of little importance historically and economically speaking till the great influx of settlers summoned by Battus II coupled with the growing friendship with Egypt under Amasis, raised the city to the first rank in wealth and splendour. Such an outburst of prosperity (c. 570) is just the occasion we should seek for the inauguration of the Cyrenaic coinage.

SECOND PERIOD.

The connecting links between the first and second periods are the coins bearing on the reverse the head of Zeus Ammon,³⁶ and those mentioned above bearing inscriptions, which now become universal.³⁷ The tetradrachms of the second period fall into three groups, as the art develops from archaic to transitional style. In the first the eye is represented in full, almond-shaped, and very large; the hair is simply arranged—it is smooth on the crown of the head, but along the temples, round which is bound a plait, appear three rows of tight curls. Both hair and beard are indicated in the most formal manner by nearly straight strokes, the truncation of the neck is left plain, and the whole is enclosed in a circular, not a square, incuse. Two good examples of the Attic tetradrachm of this first group are to be found in the Warren and Jameson Collections.³⁸ A didrachm also exists in the British Museum, the last Attic didrachm to appear in the Cyrenaic series for more than a century. The Attic standard is not, however, the only

³⁶ *Traité*, Nos. 2016, 2017, 2020, &c.

³⁷ Not till the third period do we meet anepigraphic coins again.

³⁸ *Regling, Samml. Warren*, Nos. 1340-1; *Jameson*, Pl. lxi. 1349.

one to be employed at this period, even for tetradrachms, as the following coin witnesses.

9. *Obv.*—Silphium with two whorls and five umbels.

Rev.—Head of Ammon r., bearded, with ram's horn (details as described above); inscr. K VPA }
outwards; dotted border.

B. M. A. 1. Wt. 193.3 grs. (restruck?).

Though the restriking may account for some slight loss, the weight of this coin is certainly not Attic. It might be Aeginetic or Samian. The first alternative is possible in view of the connexion with the Aegean, and especially with Crete, for which there is much evidence, and we have a later example at Cyrene of the employment of what seems to be the Cretan-Aeginetic standard.³⁹ But the weight though low is not too low for the Samian standard,⁴⁰ the use of which becomes general in the next period, and it is easier to regard the coin as an interesting anticipation of this later development. Of the same group and standard is a hemidrachm in the Ward Collection,⁴¹ and to that must be added the following three coins with a different reverse type.

10. *Obv.*—Silphium plant with two whorls and three umbels; in field l., seed.

Rev.—Head of the nymph Cyrene r., the hair bound with a pearl diadem and caught up behind *en chignon*; incuse square, in the top corners of which K V [; bottom corners obscure].

A. Wt. 49 grs. Brussels (Coll. Hirsch).

³⁹ See below, Silver Coinage of Fourth Period.

⁴⁰ Though the normal weight of the Samian tetradrachm is 200-206 grains, we have early examples from Samos weighing as little as 188.3 and even 188 (*B. M. C.: Ionia*, p. 351, Nos. 19 and 22).

⁴¹ Ward Coll., No. 904.

11. *Obv.*—Silphium plant with two whorls and three umbels; in field l. a seed with its pericarp, around, four dots placed . . .

Rev.—Head of Cyrene l. as above, but of different style; in front **KVPA**, behind **N A** ∪ outwards; dotted border; circular incuse.

R. 0-6. *Wt.* 51 grs. Copenhagen (M. i. 116).

12. *Obv.*—Similar, but without seed.

Rev.—Head of Cyrene, of style similar to No. 11, but more advanced; in dotted circle; in incuse square, in the corners of which **K** **V**

V **d**

R. 0-55. *Wt.* 51-9 grs. *B. M.* = *M. i.* 115.

The head on No. 12 has been described by Müller as Apollo,⁴² but there seems no reason to consider it as different from that on No. 11, the inscription **KVPANA** on which, it may be suggested, refers to the type as well as to the city. Parallel with these coins, and linking up with the next group, is the series of drachms and hemidrachms bearing the types of the head of Ammon and silphium.

13. *Obv.*—Silphium plant.

Rev.—Head of bearded Ammon r. in dotted circle in incuse square, in corners of which **K** **V**

B. M. *R.* 0-6. *Wt.* 50 grs. **V** **d**

The general arrangement of the hair is like that of the similar heads in the first group, and the eye though not so pronounced is still almost entirely full. On the other hand, the truncation of the neck is dotted. As a rule the silphium has no pair of umbels springing on either side above the highest whorl. The absence of these is a sign of early date, though the contrary does not hold.

⁴² i. 115.

Two early varieties may be mentioned here.

14. *Obv.*—Silphium plant with two whorls and three umbels.

Rev.—Head of Ammon as on No. 13; but inside the dotted circle to l. and r. of head $\begin{matrix} K & V \\ P & A \end{matrix}$; incuse square.

B. M. *R.* 0-6. Wt. 50-7 grs.

15. *Obv.*—Silphium plant as above.

Rev.—Head of Ammon as on No. 13, but l.; the hair is allowed to hang down as far as the nape of the neck, in the fringe appears the uraeus; all in dotted circle in incuse square, in the corners of which $\begin{matrix} V & \chi \\ A & \lambda \end{matrix}$

Paris. *R.* 0-6. Wt. 53 grs.

The interest of No. 15, which is one of the earliest of its class, lies in the presentation of the head of Ammon. It gives the only example I know of at Cyrene of the wig-like Egyptian treatment of the back hair, which is so noticeable a feature of the contemporary coins assigned to Golgoi with the types *obv.* Hermes, *rev.* Head of Ammon.⁴³ This is the first appearance too of the uraeus, which does not occur again for more than half a century.

From this time the coins of Barce and Euesperides are exactly like those of Cyrene, and can only be distinguished by the legends. The puzzling letters Γ and Δ , which appear on some of the drachms of Barce, will be discussed later.⁴⁴

This series of drachms leads into and overlaps with the second group of tetradrachms of the period.

⁴³ *B. M. C.: Cyprus*, p. 70.

⁴⁴ See p. 78.

16. *Obv.*—Silphium with two whorls, five umbels, and root.

Rev.—Head of Zeus Ammon r. (fine archaic style); in front, **BAP** ∩; thick dotted border in circular incuse.

Attic tetradrachm (Hunter Coll. (Barce). *AR.* 1-35. Wt. 266.5 = Macdonald, iii, p. 578, No. 1). Also Samian drachm, B. M. (Cyrene. *AR.* 0-55. Wt. 53.8), and hemidrachm, B. M. (Cyrene. *AR.* 0-4. Wt. 24.8 grs.).

The style of this head (which occurs both at Barce and at Cyrene) is more advanced than that of No. 9 and the two coins in the Warren and Jameson Collections, and the hair is differently arranged. The plait coiled round just above the nape of the neck remains, and the fringe of curls above the forehead; but the hair on the crown and back of the head gives the impression of being waved and crimped. Only one corner of the eye is now seen, and on well-preserved specimens the eyelash is clearly visible; the truncation of the neck is dotted. Corresponding to the tetradrachm are a drachm and hemidrachm of similar treatment, the head on the reverse being in a dotted square in place of the usual circle.

The third and last group in the second period provides us with several interesting pieces, and some puzzles. It is the most numerous of the three, and consists largely of tetradrachms.

Cyrene.

17. *Obv.*—Silphium plant with two whorls and five umbels in field to l. and r.

M	Ξ
[E	V]

Rev.—Head of bearded Ammon r., the eye about three-quarter face, the hair arranged as on No. 9; in front, **KVPA** ∩ outwards; dotted border.

Berlin (M. Suppl. 121 A). *AR.* 1-1. Wt. 244 grs. (corroded).

18. *Obv.*—Silphium plant, as on No. 17; to l. and r. of base [E] V

Rev.—Head of bearded Ammon r., with the hair arranged as on No. 16, but the beard breaking into loose curls and the eye more in profile; in front KVPA ∩

Berlin. AR. 1-05.

Another example in Copenhagen completes, and is in turn completed by, No. 18. The obverse of the Copenhagen specimen seems to be from the same die, and reads E to l. of the base of the silphium, the space for the V being off the coin. The reverse, though from a different die, is very close in style to No. 18; unfortunately, the space in front of the face is badly corroded, and this renders the inscription illegible, but presumably it also was KVPA.

Barce.

19. *Obv.*—Silphium plant with two whorls and five umbels.

Rev.—Head of bearded Ammon r., with the hair and beard treated as on No. 18; in front K9A8 ∩ outwards; behind, T.

Berlin. AR. 1-05. Gwinner (same dies).

20. *Obv.*—Silphium plant with two whorls and five umbels (the base of the stalk off the coin).

Rev.—Head of bearded Ammon r., the hair in rows of tight curls, the beard curling freely in triple border; in front of the nose and encroaching on to the border, T; all in incuse square, in the corners of which B A
X [d]

B. M. Attic tetradrachm. AR. 1. Wt. 249.4 grs. (20 a).

On another coin (20 b) from the same dies in the Hirsch Collection at Brussels, the silphium plant is struck

higher up on the flan, revealing on either side of the base of the stalk a letter, of which a corner may be seen on the Museum specimen. These letters, though largely formed, are straggling and very uncertain: they seem to resemble **TE**, but the lowest bar of the **E** and part of the **T** are off the coin. In connexion with this piece another coin may be studied.

21. *Obv.*—Silphium plant with two whorls and five umbels; at base of stalk to l. and r., **Ξ T**.

Rev.—Head of Ammon r., style advanced towards transitional, the beard slightly curling; in front of face, **Β**
Α; all in dotted circle, in circular incuse.

Paris (Samian drachm). Wt. 50·6 grs. = M. Suppl. 331 A. Bompois, Pl. I. 10.

22. *Obv.*—Silphium plant with two whorls and five umbels; to l. and r. of base of stalk **K V**; in field r. **Δ**? (the last letter doubtful).

Rev.—Head of Zeus Ammon r., of coarse type, the hair and beard treated as in No. 20; in front

Β
of the face **Α**; all in incuse square.
Ρ

B. M. A. 1·15 (Attic tetradrachm). Wt. 248·4 grs.

Cyrene—Euesperides.

In connexion with Nos. 17 and 18, on which the name of Euesperides has already been recognized by Müller,⁴⁵ it is necessary to go closely into the history and early numismatics of that city.

The earliest coins attributable to this, the westernmost of all the cities of Cyrenaica, are the following:—

⁴⁵ Müller, Suppl., p. 8, Nos. 121, 121 A, and note.

23. *Obv.*—Silphium with two whorls and three umbels;
to l. and r. of base of stalk, **E** **Σ**.

Rev.—Dolphin l.; beneath, **EY**; above to l. and r., a dot;
incuse square.

B. M. *Al.* 0.45. Samian drachm. Wt. 48.6 grs.
(very rough style).

24. *Obv.*—Silphium with two whorls and five (?) umbels.

Rev.—Dolphin to r. diagonally downwards; beneath,
cloven hoof (of a gazelle?); above, **EV**; all in
incuse square.

Warren Collection.⁴⁶ *Al.* 0.55. Samian drachm.
Wt. 53.5 grs.

Two varieties of this coin, which have given rise
to some confusion by their imperfect condition, are
worthy of mention.

25. *Obv.*—Similar to No. 24 (? trace of letter **E** to l. of base
of stalk, the larger part being off the coin).

Rev.—Similar to No. 24, but above **EA** (*sic*).

Paris. *Al.* 0.6. Samian drachm.

26. *Obv.*—Similar to No. 24 (again trace of **E**?).

Rev.—Similar, but dolphin to l., diagonally upwards;
beneath, in l. bottom corner of the incuse
square, **V**.

Brussels (Coll. Hirsch). *Al.* 0.6. Wt. 41 grs.
(worn). Samian drachm.

27. *Obv.*—Similar to No. 24 (again traces of letters?).

Rev.—Dolphin r., beneath a crab's claw, above **EV**;
circular incuse.

Brussels (Coll. Hirsch). *Al.* 0.5. Wt. 45 grs.
(worn). Samian drachm.

28. *Obv.*—Silphium as on No. 13.

Rev.—Head of bearded Ammon r. as on No. 13, but
E **V**
Σ **Ξ**

⁴⁶ Regling, *Samml. Warren*, p. 214, No. 1367.

B. M. A. 0.65. Wt. 47.3 grs. Also Samian drachms and hemidrachms (B. M. A. 0.55. Wt. 19.7 grs.)

Of Nos. 25, 26, and 27, either the reverses are much corroded or the lower part of the field is off the coin, but on all there are traces of letters as indicated,—on No. 25 what might clearly be the top bar of an **E**. With No. 23 before us, it may be suggested that all these obverses should be read **E** Σ . The reverse inscription of No. 25 has been read as **FV**,⁴⁷ and referred to a town Hydrax, a reading superficially supported by the fact that on No. 26 **V** appears apparently alone. But (1) Hydrax is a place unknown save for Ptolemy and Synesius, and therefore not *a priori* likely to have been a mint in the archaic period; (2) on No. 26, though no letter is visible save **V**, the whole length of the field above the dolphin's back, where there would be room for the letter **E**, is off the coin; (3) No. 24 incontestably reads **EV**, and is so closely bound by style, type, and fabric to Nos. 25 and 26 that it must surely issue from the same mint. All these considerations render it almost certain that Nos. 24-6 belong to Euesperides, a conclusion that would be confirmed if the reading on the obverse of these coins turns out, as is here suggested, to be **E** Σ .

Nos. 23 and 27 are certainly, to judge by style, earlier than No. 28. If we may admit the argument from the succession of types at Cyrene and Barce, where the various animal and general types appear first, to be ousted by Zeus Ammon, Nos. 24-6 are also earlier, though stylistically there is little difference.

⁴⁷ *Hist. Num.*², p. 873, note.

Now No. 28 is one of the large series of drachms and hemidrachms, issued equally at Cyrene and at Barce, to which reference has been made above. That series overlaps and so connects the first and second groups of this period, *i.e.* its date is c. 480-460. Nos. 23-7, or at least Nos. 23 and 27, are therefore not later than c. 480. But here we are faced with a historical difficulty, since the accepted date of the foundation of Euesperides is c. 460.⁴⁸

Most of our information about the early history of Euesperides is contained in Pindar, *Pythian V*, and the Scholiast's notes thereto. The relevant passage runs as follows:—*Ταῦτα δὲ πιστοῦνται [ὁ Δίδυμος] παρατιθέμενος τὰ Θεοτίμου ἐκ τοῦ πρώτου περὶ Κυρήνης ἔχοντα οὕτως διαπίπτουσιν δὲ τὴν πρᾶξιν αἰσθόμενος Ἀρκεσίλαος καὶ βουλόμενος δι' αὐτοῦ τὰς Ἑσπερίδας οἰκίσαι πέμπει μὲν εἰς τὰς πανηγύρεις ἵππους ἀθλήσοντας Εὐφήμον ἄγοντα, νίκησας δὲ τὰ Πύθια καὶ τὴν ἑαυτοῦ πατρίδα ἐστεφάνωσε καὶ ἐποίκους εἰς τὰς Ἑσπερίδας συνέλεγεν. Εὐφήμος μὲν οὖν ἐτέλευτα· Κάρρωτος δὲ τῆς Ἀρκεσιλαίου γυναικὸς ἀδελφὸς διεδέξατο τὴν τῶν ἐποίκων ἡγεμονίαν. ὁ τοίνυν Πίνδαρος τοὺς ἐταίρους καθομιλῶν τὸ καταπραχθὲν τῷ Εὐφύμῳ τῷ Καρρώτῳ προσῆψε· μόνον γὰρ κατορθῶσαι φησιν αὐτὸν ἀγαγόντα τὸ στρατιωτικόν.⁴⁹*

This passage has been taken to prove that Euesperides was founded by Arcesilas IV to secure his uncertain throne.⁵⁰ But surely this is not the natural interpretation of the passage: in such a case we should have expected

⁴⁸ *e.g.* *Hist. Num.*², p. 873, *Euesperides*, and Pauly-Wissowa (where no account of the city itself is given), *s.v.* *Hesperiden*, "Die nach der Überlieferung 460 gegründete Stadt Euesperides."

⁴⁹ Pind., *Schol.* (Teubner), pp. 175-6.

⁵⁰ "Um sein wankendes Regiment zu stützen." Bosolt ii.² 535.

πράγματα for *πράξιν*, which must mean either "good success" or "the business" generally, and is not used with the political significance of *πράγμα*. The passage here quoted is taken out of its context; I would suggest that *πράξις* refers not to the fortunes of Arcesilas, but to the previous plantation (or plantations) of Euesperides. Such an explanation would also give point to the *δι' αὐτοῦ* of the next phrase. The whole sentence would then run: "Arcesilas saw the business was falling through (imperfect), and wished to colonize Hesperides on his own account, so he sent," &c. Like Hiero of Syracuse, Arcesilas wishes to make a display of his wealth and power, and Euesperides is colonized like another Catana-Aetna. That, like Hiero again, Arcesilas had the intention of providing himself with a retreat in case of need, is made probable by the fact that he fled there on the revolution at Cyrene only to meet his death.⁵¹ Theotimus, however, does not say so.

That Euesperides existed previous to 460 is also shown by a passage of Herodotus, referring to the Persian expedition in the closing years of the sixth century: *οὗτος ὁ Περσέων στρατὸς τῆς Λιβύης ἐκαστάτω ἐς Εὐεσπερίδας ἦλθε*.⁵² Finally, we have the literary evidence confirmed by the coins Nos. 23-8 described above, of which all, judging by style and by comparison with the issues of Barce and Cyrene, should be earlier than 460, and some earlier than 480.

That Euesperides cannot have been in a flourishing way, probably because of the attacks of Libyans, to

⁵¹ Heraclides, *Pol.* iv. 4, who calls him "Battus".

⁵² Herodotus iv. 204. In this passage *Εὐεσπερίδας* has been taken to mean the name of the district and not the town, but only because it was supposed that the town did not then exist.

which its exposed position rendered it particularly liable, is suggested by the fact that from the period before 460 no coins larger than the drachm have come down to us.

It is difficult to resist the conclusion that our Nos. 17 and 18 were struck in direct connexion with Arcesilas's attempt to revive Euesperides for his own benefit, possibly even for the pay of the *στρατιωτικόν*, which the *éclat* of his Pythian victory enabled him to enroll in Greece. In this connexion it is interesting to note that the style of No. 17 is quite different from that of the other Cyrenaic heads of Ammon, and rather recalls the art of Greece Proper. Now Arcesilas's Pythian victory was won in 462. Our Nos. 17 and 18, therefore, or at least No. 17, which seems to be the earlier, were struck in that year or the year following—"alliance" coins of Cyrene and Euesperides. Even if we may not take for granted that these coins were issued on the immediate occasion of Arcesilas's plantation, we may at least assume that they were issued between that event and the tyrant's downfall, *i. e.* 462 and *c.* 450.

Barce—Teucheira.

At Barce, in the third group of the second period, we get an exactly similar phenomenon, though the readings are not always so clear, and there is a greater element of doubt about the explanation of some features. It is best perhaps to begin from the clearest and work towards the more uncertain.

Our No. 21 was described originally by Bompois,²³

²³ Bompois, *Médailles grecques frappées dans la Cyrénaïque*, p. 53, Pl. i. 10.

and then published by Müller in his Supplement.⁶⁴ Both authors, however, miss the significance of the inscription on the obverse, and take the retrograde **Θ** (which the engraver has placed so that the dotted circle encroaches upon its upright stroke) for a symbol, "possibly the half of a grain of silphium." The **Ρ**⁶⁵ then becomes the beginning of a name, for Bompōis that of a town, Darnis or Ardanixis, for Müller that of a magistrate. The shape of the **Β** is very similar to that on Nos. 3 and 22. Once the first letter is recognized as a **Β** we cannot resist recognizing the whole as the beginning of the ethnic **ΒΑΡΚΑΙΟΝ**, so that, if **ΤΕ** represents Teuchēira, the piece falls into line with the contemporary alliance pieces of Cyrene and Euesperides. Such a connexion would be amply confirmed by what we know of the history of Barce and Teuchēira. Teuchēira was a port which served the inland city of Barce. It was close to it geographically, and was politically subordinate. Herodotus calls it πόλιν τῆς Βαρκαίης.⁶⁶

⁶⁴ p. 15.

⁶⁵ The occurrence of a monogram so early is rather surprising; but not much later, in the next period at Cyrene, on one of the earliest coins of the magistrate Νίκης, we find the **Ο** and **Ν** of the ethnic ligatured.

⁶⁶ iv. 171. In Pauly-Wissowa, s. v. *Barke*, it is stated that Euesperides was also at some time part of the domain of Barce, but the only reference given in support of this statement rather points to the opposite. The passage is in Diodorus, xviii. 20. 3, and is perhaps worth giving to correct the error. Thimbron having overawed the Cyrenaeans διεπρεσβέυσσατο δὲ καὶ πρὸς τὰς ἄλλας πόλεις ἀξίων συμμαχεῖν ὡς μέλλοντος αὐτοῦ τὴν πλησιόχωρον Λιβύην καταστρέφεισθαι . . . Cyrene revolts . . . τῶν δὲ Βαρκαίων καὶ τῶν Ἑσπεριτῶν συμμαχοῦντων τῷ Θίβρωι Κυρηναῖοι . . . ἐπώρθουν τὴν τῶν ἀστυνόμενων χώραν. This is confirmed for an earlier period by the language of Herodotus in the passage quoted above. Ἀστυνόμων δὲ ἔχονται τὸ πρὸς ἑσπέρης Αὔσχισαι· οἱ τοὶ ἐπὶ Βάρκης οἰκίσουσιν, κατήκοντες ἐπὶ θάλασσαν καὶ

On No. 20, as has been mentioned, the letters are not so clear, but the reading **TE** (from the Hirsch specimen) seems the most likely, besides being along the line of least resistance. The inscription, whatever it is, is bound to be either an ethnic or what is termed for convenience' sake a moneyer's name or mint letter. The first alternative is most likely, because (1) it is in the place regularly employed for the ethnic, both in this period (when the inscription appears on the obverse at all) and in the next, and (2) if a conclusion to be reached later is correct, the **T** on the reverse is to be regarded as a mint letter, and we should not expect another on the same coin. Granted that it is an ethnic, it might be a continuation of the inscription begun on the obverse,⁵⁷ but no possible ingenuity can read the letters as **AI**, which is what in that case they would have to be. Nor again are they **KV** or **EV**, the only other alternatives that we have reason to expect. This tetradrachm then should be placed side by side with the drachm No. 21, which it resembles in the freer treatment of the beard and eye.

The letter **T** which occurs on the reverse raises a very difficult question, to which it is not possible to give a satisfactory answer. This letter occurs only on coins of Barce, and its occurrence there seems to be arbitrary: for example, we find it in varying positions on the regular series of drachms mentioned above linking the first and second groups; we find it also on a tetradrachm of the third group (here No. 19)

Εὐσπερίδας. Ἀναχισίων δὲ κατὰ μέσον τῆς χώρας οἰκίσαντι Βάκαλῃς, ὀλίγον ἔθνος, κατήκοντες ἐπὶ θάλασσαν κατὰ Ταύχειρα πάλιν τῆς Βαρκαλῆς. The language implies that Euesperides was not a πόλις τῆς Βαρκαλῆς.

⁵⁷ Cp. the coin figured in Coll. Jameson, Pl. xcvi. 1343 n.

which, though the beard is more freely treated, recalls in style the weaker coins of the second group. It is often inserted upside down, sometimes encroached on by the border in such a way as to leave its real nature open to doubt, and is always on the reverse. Müller, who first noted it, suggests that it may be the initial letter of Teucheira,⁵³ but there are two reasons against this. First, on certain other coins the letter Δ (and possibly the letter Α)⁵⁴ occurs in exactly the same circumstances, and no explanation can be admitted which does not equally cover all cases. Supposing, as is likely, that Α is a misreading for Δ, we have to find another city beginning with Δ with which Barce is to be in alliance. The only possibility is Darnis, that last resort of all who are puzzled by Δ in the Cyrenaic series. Darnis was the most easterly city of Cyrenaica, just on the borders of Marmarica, and therefore the most unlikely place to hold close relations with Barce. Ptolemy is the first witness to its existence as a town at all, and it does not become of importance till late imperial times. If the reading Α is to stand as well, the difficulty becomes hopeless. The second reason why Τ cannot be the initial of an ethnic is, that on our No. 20, where it occurs on the reverse, we already have on the obverse letters which must represent an ethnic, whether of Teucheira or no is immaterial for the moment. To have three ethnics on one coin would be almost in-

⁵³ i, p. 85.

⁵⁴ Α is alleged to occur on a coin quoted from Pellerin by Müller, which, he says, is not in the Paris Collection. Now there is in the Paris Collection a piece reading Δ with a little stroke on one side which might have been taken for Α, and this is possibly the coin referred to. Dr. Imhoof-Blumer tells us that he has never met with Α.

conceivable. We must fall back, then, upon the conclusion that both **T** and **Δ** (and **A** if it exists) are simply "mint letters", though the practice of putting magistrates' names on coins does not begin in the Cyrenaica for another half-century. It must be confessed that it would be surprising to find such a use (it did not become a general custom) so early, although in view of the contemporary or even earlier practice at Messene quoted above⁶⁰ it is not impossible.

Barce—Cyrene.

The interesting piece, No. 22, remains. Of the letters on the obverse, the **K** and **V** are quite plain though carelessly formed; the **P** is not so certain: if it is accepted, the inscription ran in a circle outwards. Though the style of this coin is coarse, it is more advanced in such details as the eye and beard than are any of the other alliance coins. The type of Ammon, much nearer the ram than the ideal presentations of the second group, recalls the brute nature which comes out so strongly in the heads of the next period. We shall not be far wrong in putting it towards the very end of the second period, to which it clearly belongs. Even if the third letter of the inscription be not regarded as proven, it is incontestably an "alliance" coin of Barce and Cyrene. These two cities, rivals for the hegemony of Cyrenaica, were more often at enmity than friendship. The issue of "alliance" coins of Barce-Teucheira looks like a direct answer to the menace implied in the "alliance" coins, Cyrene-Euesperides. What can have been the occasion of the issue of alliance coins of Barce-Cyrene?

⁶⁰ See p. 56, note, and cp. No. 1.

The coins of Cyrene-Euesperides, according to the theories here advanced, were issued by Arcesilas after B. C. 462. Herodotus's account of Cyrenaic history, though he makes no direct mention of such an event, implies the previous fall of the kingly house. The famous oracle cannot but be, as Busolt points out, a *vaticinium post eventum*. Herodotus's account is worked up from material gathered during a visit which probably took place about 443.⁶¹ Allowing time for the oracle to establish itself in circulation, the fall of Arcesilas cannot have occurred much later than 445; for other reasons it is probably not much earlier than 450. Arcesilas had made himself hated: there were many powerful exiles. Is it not likely that the exiles retired on Barce, the natural enemy of their own city, and thence plotted the tyrant's downfall? Barce would naturally be willing to do all in her power to harm the government of her rival. If, as has been suggested on the poor authority of Polyænus,⁶² Barce was already a republic, the likelihood is increased. May we not see in this coin the recognition of help afforded in the successful attempt of the Cyrenæans to expel their king? Such help would be very needful to the new government of Cyrene. Arcesilaus still lived; at first

⁶¹ Jacoby in Pauly-Wissowa, s. v. *Herodotus*, p. 254.

⁶² Polyæn. vii. 28, describing the siege of Barce by Arsames, presumably c. 483, speaks of *οἱ ἀρχότες* as being sent by the besieged city to treat for terms. This has been taken to show that Barce had already ejected her kingly house: but (1) Busolt and Meyer regard the incident as a duplication of the Aryandes-Barce story; (2) if, as is very possible, it does refer to a second siege, Polyænus is very likely to have written the story in accordance with his own ideas of what an ancient Greek city was like, and to have been mistaken in mentioning the *ἀρχότες* who (3) may anyhow quite well have co-existed with a king; see p. 73, note 47.

he had fled to his stronghold Euesperides, where later he was to meet his death. The city would be full of disaffection, dissatisfied revolutionaries or adherents of the old régime—equally a menace to the new government. Friendly and close relations with Barce would be for the moment essential.

With the "alliance" coins Cyrene-Euesperides, Barce-Cyrene, the name of Cyrene ceases to appear till well on into the next period when the transitional style is almost over. There is no such gap in the Barcean series. Its style develops continuously into the third period, whose beginning we may define arbitrarily, though with convenience, by the final supersession of the Attic by the Samian weight standard. At least two coins of Attic weight seem to have been struck at Barce after the issue of the Barce-Cyrene "alliance" coin.

29. *Obv.*—Head of bearded Ammon r., the eye three-quarter face, the beard and the hair realistically treated though not curled; in front, BAP ∩; triple dotted border.

Rev.—Silphium with two whorls (three visible leaves) and seven umbels; in incuse square.

Paris. *Ar.* 1-1. Attic tetradrachm. Wt. 263 grs.

30. *Obv.*—Silphium plant with two whorls (three visible leaves) and seven umbels; traces of root to r.

Rev.—Head of bearded Ammon r., the horn curling above, not round; the ear, the beard, and hair realistically treated, the latter breaking into loose curls all over the head; dotted circle, round the outside of which BAP]KAIO[N ∩, circular incuse.

B. M. *Ar.* 1. Attic tetradrachm. Wt. 258.1 grs.
Ward Coll., No. 903 (different dies), 259.5 grs.

Nos. 29 and 30 stand close together, (1) by reason of the treatment of the hair which, though differently conceived in the two cases, in both is freer than anything which has preceded, (2) in the representation of the silphium. Here for the first time we find—what is comparatively common on later coins—a whorl conceived as having two pairs of leaves at right angles to each other, instead of a simple pair in a straight line. Of course only three leaves would be visible, the other being at the back. To correspond to this extra pair of leaves (of which one only is visible) we have an extra umbel; presumably there would be another umbel at the back to correspond to the other (invisible) leaf. In fact every subsidiary umbel⁶³ corresponds to a leaf above which it rises. The result is that, in the new presentation of the whorl, two leaves and two umbels appear seen from the side, one leaf and one umbel seen from the front. No. 29 is further remarkable for the use of the obverse for the head, here an isolated example of the practice which becomes general after the turn of the century. No. 80 shows equally convincingly that it stands on the threshold of the next period; besides the general freedom of style and the type of silphium, referred to above, one particular feature, the rather weak variation of the ram's horn, is repeated on three occasions in the third period.⁶⁴ A striking similarity in the conception of the head, though the style is a little more developed, occurs later, as on the drachm No. 38, published below. With these two coins the series of Attic tetradrachms ends.

⁶³ *i. e.* all except the main flower on top.

⁶⁴ See below, Nos. 34-6; on No. 34 we have also the same circular arrangement of the legend.

What was the date of the final victory of the Samian standard which marks the beginning of the third period? It is generally supposed⁶⁵ that the change took place as a result of the expulsion of the Battiads, which (as we have seen above) can be dated with some certainty to the years 455-445; but if our explanation of the Barce-Cyrene alliance coin is correct, the Attic standard must still have been in use in the Cyrenaica after the revolution, a conclusion which is supported by the developed style of Nos. 29 and 30. The principal mint from which tetradrachms of Samian weight had hitherto been issued was Samos. Now in 439 that island revolted, and after a protracted siege was reduced by the Athenians. Though it has been generally assumed that the mint began to work again immediately after the capitulation, such a concession would seem to be at variance with the general practice of Athens in the matter of the rights of coinage, about which she was particularly jealous towards her subject allies. Further, the obvious change in style between the pieces of the earlier period (*B. M. C.: Ionia*, p. 353, Nos. 28-41), and of the series supposed to begin in 439 (*ibid.*, pp. 357 ff., Nos. 82-99), seems to demand a chronological explanation.⁶⁶ If we may assume that the Samian mint ceased operations for some years after the reduction of the city, the resulting shortage of tetradrachms of Samos which

⁶⁵ Maller, *passim*, and *Hist. Num.*², p. 868, where the date of this event is given as 431, which must be too late.

⁶⁶ If, with Professor Gardner ("Samos and Samian Coins," *Num. Chron.*, 1882, p. 244), we could place in the gap the Samian coins of Attic weight (*B. M. C.: Ionia*, p. 361, Nos. 126-8) all would be simple. But the square shape of the lion's scalp, the tilt of the bull's neck, his decoration, the presence of symbol or monogram all point to these rare coins falling after the dated series.

(to judge by the issue of drachms of Samian weight at Cyrene must have been very popular in Cyrenaic exchange) would give us an excellent reason for the issue of Cyrenaic tetradrachms on that standard. This would be not so much a strikingly new departure as the consummation of a change begun the best part of a century before by the introduction of Samian drachms, and at least anticipated by the tetradrachm No. 9 described above.

It may be worth while here to note two pieces of negative evidence which throw some light on contemporary history. First, according to one account,⁶⁷ Barce was subjected to a second siege by the Persians just before Xerxes' invasion of Greece, and was reduced and heavily punished. Events of such a nature would explain the entire absence at Barce of coins of the first group of the second period, corresponding to No. 9 above of Cyrene, an absence which is remarkable in view of the fact that the last issues of the first period and the second group of the second are represented. Secondly, it has been hinted above that Cyrene after the expulsion of the Battiads was in a weak condition, and this is confirmed by the alliance coin No. 22, Barce-Cyrene. We even get an indication from the disposition of the two ethnics on this coin that Barce may have been the predominant partner. On all the other "alliance" coins published above—Cyrene-Euesperides, Barce-Tencheira—the name of the predominant state

⁶⁷ Polyaen. vii. 28. See above, p. 81, note 62. If, as Meyer and Busolt suppose, this is a duplication of the earlier siege it is a very circumstantial one. But why should it be a duplication? Polyaenus knows of the other siege as well, and if we must have duplication, it is easier to grant duplication of particulars than of the whole.

(Cyrene or Barce as the case may be) appears on the reverse beside the head of Ammon, the name of the dependant on the obverse with the silphium; now in the Barce-Cyrene "alliance" coin, the name of Barce appears on the reverse, that of Cyrene on the obverse. Further, as has been observed above, there are no coins of Attic weight at Cyrene later than the Cyrene-Euesperides "alliance" pieces, to correspond to our Nos. 29, 30 at Barce. Once more, to anticipate somewhat, after the beginning of the next period there is still nothing to correspond to the Barcaean transitional tetradrachms of the new weight; when the Cyrenaean tetradrachms do begin again, they are often of poor and coarse work. Only on some hypothesis of temporary weakness can we explain this apparent cessation of the tetradrachm coinage at Cyrene for something like twenty years.

Finally, towards the end of the second period I would place the following coin; from which town of the Pentapolis it issued, the absence of inscription prevents our even guessing.

31. *Obv.*—Silphium plant with two whorls and five umbels, and with root.

Rev.—Head of bearded Ammon r.; dotted circle in circular incuse.

Paris. A. 0.5. Wt. 53 grs. Samian drachm.

This very interesting piece is the first of the Cyrenaic gold issues. The head recalls, in the arrangement and treatment of the hair, the second group of the second period (No. 16); the eye is not yet seen in profile. It is interesting to note that the same standard is employed for the gold as for the silver drachms.

THIRD PERIOD.

The third period begins and ends with a change in the silver weight standard. The beginning is marked, as we have seen above, by the introduction (c. 435) of the Samian standard for tetradrachms, the end by the introduction of the Rhodian standard after 308. The latter date we can fix with some precision. Since Alexander the fortunes of Cyrene had become involved for better for worse with those of Egypt; after a short period of revolt under Ophellas, Magas was sent in 308 to recover the cities for his stepfather, a task which he successfully accomplished. From that date down to Magas's rebellion the district was Egyptian. Now c. 305 Ptolemy changed the standard of his satrapal coins from Attic to Rhodian. It is a safe deduction that the issue of the Cyrenaean coins of Rhodian weight followed that change.

Within this period (435-305) a continuous development may be observed. Towards the close of the fifth century magistrates' names begin to appear freely on the coins, and the head is moved from the obverse to the reverse. Early in the fourth century a plentiful coinage in gold, and on a new standard, the Attic, begins; half a century or so later the Samian silver standard is superseded once more by the Attic, didrachms taking the place of tetradrachms. The obverse type shows much variety; instead of the everlasting bearded Ammon we find Eros, Dionysus, and the beardless Ammon. Towards the close of the century a bronze coinage is introduced.

As in the last period, the issues of Barce and Cyrene run closely parallel in style to each other. But it is

remarkable that whereas the early years of the period, say down to about 420, seem to be empty at Cyrene and full at Barce, after the end of the century the positions are reversed. There are very few coins of Barce that we can put later than c. 390, nor does the city share in the plentiful gold issue of the fourth century. Some pieces have no ethnic, and in such cases it is almost impossible to decide by style to which city they belong, unless they bear an already familiar magistrate's name. The omission of the ethnic is curious, and seems to be quite arbitrary. Throughout the previous period its presence on all tetradrachms and almost all subdivisions is constant.

In the earlier part of this period (say down to c. 390) small denominations are much rarer than in the latter.⁶³ In addition to the drachm, the hemidrachm, and the obol, we find a coin of about 15 grs., presumably a trihemiobol (see below, p. 95).

Barce.

32. *Obv.*—Silphium plant with two whorls and seven umbels.

Rev.—Head of bearded Ammon laureate r.; ΙΑΧΡΑΒ Δ.

B. M. A. 1. Wt. 195.7. Samian tetradrachm.

The severity of the treatment, the formality of the hair and beard, mark this coin as transitional. It forms with another in the British Museum and a coin (from the same die) in Paris a group which must stand at the head of the series of tetradrachms of Samian weight.

Another group may also be mentioned which looks

⁶³ This is even more the case at Cyrene than at Barce.

back to the last coins of the previous period, especially No. 30.

33. *Obv.*—Silphium plant with three whorls and seven umbels.

Rev.—Head of bearded Ammon l., laureate (hair and beard still formal); ΒΑΡΚΑΙΟΝ ∅; circular incuse.

Paris. At. 1-1. Wt. 205 grs. Samian tetradrachm.

34. *Obv.*—Head of bearded Ammon l., diademed, the hair and beard more freely treated, the horn curling above the ear; ΒΑΡΚΑ[ΙΟΝ ∅.

Rev.—Silphium plant with four whorls and nine umbels; circular incuse.

Paris. At. 1-1. Wt. 203 grs. Samian tetradrachm.

The circular arrangement of the legend, the head turned to the left, contrary to the usual practice, and the peculiarity of the horn (on No. 34) link up these two coins with No. 30. On No. 34 the head appears on the obverse, a feature it has in common with No. 29 of the last period. By this too, as well as by other peculiarities, No. 34 is linked up with two other coins which may be mentioned here.

35. *Obv.*—Head of bearded Ammon l., laureate, hair treated very much as in 34, the horn curling above the ear.

Rev.—Silphium with three whorls and seven umbels: in field l. owl; Β Α; circular incuse.
P K

B. M. At. 1. Wt. 198.5 grs. Samian tetradrachm.

36. *Obv.*—Head of bearded Ammon r., laureate; freer style, the horn still curved above the ear; in front, traces of letters (ΙΠΠ?).

Rev.—Silphium with three whorls and seven umbels;

B	A
P	K; circular incuse.
A	I

B. M. *AR.* 1. Wt. 202.7 grs. Samian tetradrachm.

No. 35 illustrates a practice far commoner at Barce than at Cyrene, the addition to the main type of symbols in the shape of animals or plants. The letters on the obverse of No. 36 can only refer to a magistrate. The style of this coin is not early; it is the only one with a magistrate's name on which the head is on the obverse, but the points noted (the curl of the horn, &c.) bring it into close connexion with coins, *e. g.* No. 35, which do not bear a magistrate's name, and which yet themselves, as far as style goes, would naturally be classed after coins of the earliest magistrates. It seems to follow inevitably that magistrates' names do not appear on this series at a definite point once for all, but that anonymous coins were still intercalated for some time between the signed issues. It is worth noting, however, that on the later unsigned issues, *e. g.* Nos. 35 and 43, there is a symbol, though it must be confessed that on No. 35 this seems to be more an adjunct to the type than a symbol strictly so called.

37. *Obv.*—Silphium plant with two whorls (showing three leaves) and seven umbels; on either side of the stalk springs a similar silphium plant in miniature;

B	A
P	K
A	I

Rev.—Head of bearded Ammon r.

B. M. *AR.* 1. Wt. 199.3 grs. Samian tetradrachm.

No. 37 belongs to another anonymous group, examples of which are probably the commonest coins of Barce. The style of the head of Ammon is coarse, the hair and beard freely treated in luxuriant curls, the eye heavy, with the pupil strongly marked. The head is still on the reverse. The whorls of the silphium are of the kind already noted under Nos. 29 and 30. The style is freer than on No. 32, though not so good; the inscription has followed the silphium plant on to the obverse. Coins of this class lead into and doubtless overlap the series bearing magistrates' names, which we may now discuss.

The magistrates already recognized at Barce are ΦΑΙΝ ---, ΚΑΙΝΙΩ, ΚΥΥΕΛΩ ΤΩ ΦΙΛΩΝ(ΟΞ), and ΑΚΕΣΙΟΞ, to these I would add the uncertain name ΠΠ? on No. 36 above, and ΑΛΑΙ ---.

The earliest magistrate seems to be Φ AIN---. With this name we have one tetradrachm at Paris (Müller, i. 317), and the following drachm.

38. *Obv.*—Silphium with two whorls (of three leaves),
seven umbels, and root; $\begin{array}{c} \mathbf{U} \quad \Phi \\ | \quad \mathbf{A} \end{array}$

Rev.—Head of bearded Ammon r., transitional style,
hair loose; in front 9AB 5; dotted circle;
circular incuse.

B. M. *R.* 75. Wt. 50.2 grs. Samian drachm
(misnumbered 36 on Plate IV).

The style of the head of Ammon recalls No. 30 of the last period, though it has not the same peculiar treatment of the horn. To these two coins I would add the following tetradrachm from Parma.

39. *Obs.*—Silphium plant with two whorls and seven umbels, at the base of which a recumbent gazelle: in field l. upwards, **MIO.**

Rev.—Head of bearded Ammon r., laureate(?), the hair and beard rather formal; in front **ΙΑΧΡΑΒ** ∫; circular incuse.

Parma. R. 1. Wt. 197.5 grs.

The style of the reverse of this coin recalls the group to which No. 32 belongs. Imhoof, who has published it,⁶⁹ apparently regards it as being a variety of No. 322 in Müller's work, in which case it would correct Müller's reading. Müller's reading of his No. 322, however, seems to be right, and we are still left with the -NIO-- on the present coin. It is part of a word of which the rest is off the coin; the ethnic is already accounted for, so it must be a magistrate. Of the magistrates at Barce, always supposing it to be one of those known already, **ΦΑΙΝ** - - - and **ΚΑΙΝΙΩ** present themselves as possibilities. As a completion of the first, **ΦΑΙΝΙΟΞ** (the local dialect genitive of a nominative *Φαίρις*) may be suggested; from the distribution of the extant legend we should expect three or four more letters, which is what is required. If **ΚΑΙΝΙΩ** is preferred we must suppose either that **Ο** is written for **Ω** (which is not the case on any other coins of this magistrate) or that the name is in the nominative **ΚΑΙΝΙΟΞ**, which would be exceptional though not unparalleled.⁷⁰ On the whole, though it must always remain a conjecture that **ΦΑΙΝ** - - - should be completed *Φαίριος*, I incline to the first alternative, because (1) a genitive is much more usual than a nominative, (2) **ΦΑΙΝ** - - - seems an earlier magistrate than **ΚΑΙΝΙΩ**, for, besides the style of the tetradrachm (and drachm No. 38 above) the ethnic of the latter is on the head side. Now the coin under

⁶⁹ *Z. f. N.*, Bd. vii, p. 30, No. 2.

⁷⁰ At Cyrene we find **ΝΙΚΙΞ** as well as **ΝΙΚΙΟΞ**.

discussion seems earlier than the **KAINIΩ** group, for it also has the ethnic on the head side, and its style suggests that of the group to which No. 32 belongs. Against this argument must be put the fact that the gazelle of the obverse occurs (in a different position) on a coin with **KAINIΩ**.⁷¹

Next in order seems to come **KAINIΩ**; of this magistrate we have two tetradrachms in Paris,⁷² and the following smaller denominations.

40. *Obv.*—Silphium plant with two whorls and five umbels; dotted circle.

Rev.—Head of bearded Ammon r., hair and beard free; in front, **KAINIΩ** ∪ outwards; dotted circle.

B. M. *Ar.* 0.45. Wt. 25.2 grs. Samian hemidrachm.

41. *Obv.*—"Triple silphium," consisting of three sprouts of silphium, each with one whorl and three umbels springing from a central pellet; linear circle.

Rev.—Head of bearded Ammon r., hair and beard rather formal (as on M. i. 322); in front **KAI** ∪; dotted circle.

B. M. *Ar.* 0.4. Wt. 15 grs. Samian trihemionbol.

The triple silphium is a type which here appears for the first time.

Of **KΥΨΕΛΩ ΤΩ ΦΙΛΩΝ(ΟΣ)** we have a tetradrachm at Vienna.⁷³ The fact that the ethnic is on the head side would *a priori* make us put this coin earlier, but the style does not seem specially early, though of course the head is still on the reverse, and the older position of the ethnic may be explained by the length

⁷¹ M. i. 322, 323.

⁷² M. i. 324.

of the magistrate's name which would require more room than was available round the head. To the Vienna coin I would add the following:

42. *Obv.*—Triple silphium; linear circle.

Rev.—Head of young Ammon r., beardless and horned; in front, $\text{KY}\Psi\text{E}\Lambda\Omega$ ∩; dotted border.

B. M. *R.* 0.4. *Wt.* 11.3 grs. Samian trihemiobol (?).

Of $\text{AKE}\Sigma\text{IO}\Sigma$, so far as I know, only tetradrachms exist.⁷³ The facing head on some of his coins would presumably date them to the turn of the century when the enterprise of the Syracusan engravers had brought this position into popularity.

Lastly, I would assign the following coin to Barce:

43. *Obv.*—Triple silphium; dotted border.

Rev.—Head of young Ammon r.; behind neck ζ $\text{A}\Lambda\text{A}$; in front, I outwards; dotted border.

B. M. *R.* 0.35. *Wt.* 12.7 grs. Samian trihemiobol (?).

There are two reasons for assigning this coin to Barce. Most of the other coins with the types of the head of Ammon, and the triple silphium, can be definitely connected with this city, either by the ethnic or by a magistrate; and the name $\text{A}\Lambda\text{A}\text{I}$ - - - at once suggests $\text{'A}\lambda\alpha\zeta\epsilon\acute{\iota}\rho$, which is a good Barcean name, associated in a previous generation with the royal house.⁷⁴

The denomination of these little pieces with the triple silphium is puzzling; the type itself is unusual, occurring only twice apart from this group—on an isolated

⁷³ M. i. 318-21.

⁷⁴ Herodotus iv. 164. The restoration of the name is indeed practically certain, for there seems to be no other proper name in Greek beginning with the same four letters.

tetradrachm of **ΑΚΕΣΙΟΞ** at Barce,⁷⁵ and on the series of fourth-century gold triobols at Cyrene. Its use on triobols suggests that it has a practical significance. Besides the weights of those here published, 15, 12·7, 11·3, others weigh 13·5, 13·2, 15·3, and 14.⁷⁶ The lowest weight 11·3 (our No. 42) can be partially explained by the fact that the coin is restruck. Now an obol of the Samian drachm of 53 grs. would weigh 8·8, and a trihemiobol consequently 13·2, which is the central point round which the weights of these coins gravitate. If we can assume them to be trihemiobols we have an explanation of the type such as may be offered in the case of the gold triobols—the denomination is indicated thereby as the triple of the unit.

Here the series of Barce practically ends, save for unimportant copper. Only a very few silver coins can be dated later than c. 390. Among them may be noted the following.

44. *Obv.*—Head of bearded Ammon r., laureate, hair and beard free; behind the neck, ear of corn; linear border.

Rev.—Silphium with two whorls and five umbels; to r., **ΒΑΡ** ∩; triple circle border.

B. M. AL. 1. Wt. 194·9 grs. Samian tetradrachm.

This coin cannot be much earlier than the middle of the fourth century; the style is comparatively weak, and linear borders are found at Cyrene on coins of that period,—those of the magistrates **ΘΕΥΦΕΙΔΕΥΞ** and **ΙΑΞΟΝΟΞ**. The peculiar coin at Berlin (from the Fox collection)⁷⁷ is best mentioned later.⁷⁸ Gold coins

⁷⁵ M. i. 321.

⁷⁷ M., Suppl., 325 A.

⁷⁶ M. i. 45, 46, 328, and Brit. Mus.

⁷⁸ See below, No. 68.

which may be assigned to Barce will be considered in discussing the early anepigraphic gold.

Cyrene: the silver coinage down to c. 390.

At Cyrene the history of the early coinage of the third period, say down to 390, is practically the same as at Barce, with the important exception (noted above), that though there are plenty of coins of rude workmanship there are none of the severe transitional style with the ethnic on the head side, such as begin the series at Barce. The earliest pieces are those without magistrates' names, corresponding to the Barcaeian group to which No. 37 belongs. The style of these coins is often very rough indeed, sometimes recalling the more barbarous products of Cretan mints. That of most coins of the earliest magistrate **ΝΙΚΙΞ** is exactly similar, which points to overlapping, though so far I have not been able to establish this by community of dies. In this group, apparently, the head is never on the obverse. The anepigraphic silver tetradrachms will be discussed later.

On signed coins down to c. 390 we find two names, **ΝΙΚΙΟΞ** and **ΑΡΙΣΤΟΜΗΔΕΟΞ**, less than half the number occurring at Barce, though the coins of either of these magistrates are far commoner than any of those at Barce. This looks as if they covered approximately the same period of time, the magistrates at Barce holding a shorter tenure of office than those at Cyrene, though style would indicate that the earliest magistrate at Barce *Φαίρ(ιος)*, Nos. 38 and 39 above, is earlier than *Νίκις*. In the time of Nikis the head is moved from the reverse to the obverse of the coin, though this change does not seem to have been made then once

for all, for under **ΑΡΙΣΤΟΜΗΔΕΟΣ** we get one example with the head on the reverse (No. 47 *infra*), while some of Nikis's coins with the head on the reverse seem more advanced in style than others with the head on the obverse. For instance, the coin in Müller (i. 37) seems later than the following.

45. *Obv.*—Head of bearded Ammon r., laureate and diademed (the tie showing in heart-shaped knot at the back), the hair and beard curling free, the eye three-quarter face, pupil and lashes strongly marked; in front, in straggling letters **ΝΙΚΙΞ** ∩ outwards.

Rev.—Silphium with two whorls (of three leaves) and five umbels; on either side of stalk, a shoot.

B. M. *Æ*. 1-1. Wt. 201-8. Samian tetradrachm.

This coin, apart from its exotic style, is remarkable for the case of the proper name. The nominative is practically unknown at Cyrene. A certain number of tetradrachms with *Níkios* have no ethnic, but, even if the community of name were not sufficient to give these to Cyrene, we have at least one which shares an obverse die with a coin inscribed **ΚΥΡΑ**. The following coin of Nikis, which will be useful later, may be here described.

46. *Obv.*—Head of bearded Ammon r., hair and beard free; in front, **ΝΙΚΙΞ** ∩ outwards.

Rev.—Silphium with two whorls and five umbels;

K	Y
P	A (the die pitted with rust).
N	A

B. M. *Æ*. 1-1. Wt. 198-5 grs. Samian tetradrachm. Also Paris, with the *obv.* inscription clearer.

Most of the coins of **ΑΡΙΣΤΟΜΗΔΕΟΞ** are well known; they are of fine style as a rule. Apart from the one with facing head (No. 47) there appear to be three signed obverse dies of this magistrate to six reverses. The following piece has been published before,⁷⁹ but in view of its importance may be described again here.

47. *Obv.*—Silphium with two whorls (three leaves) and seven umbels; in front r., a gazelle standing on its hind legs and browsing off the highest leaves; around, **ΑΡΙΣΤΟΜΗΔΕΟΞ** Q.

Rev.—Head of bearded Ammon, directly facing, with hair and beard in heavy curls, wearing diadem from the centre of which rises uraeus; beneath, **KYP ANA** Q outwards; dotted border.

Karlsruhe, 1.05. Wt. 206.5 grs. Samian tetradrachm.

This coin has many points of interest. The uraeus on the diadem does not often occur; the obverse type with the gazelle reminds one of Barce rather than of Cyrene; the head on the reverse shows that the change introduced in this respect under Nikis was not final; lastly, the facing head itself is a remarkable achievement, and leads on to one still more remarkable. The great impetus to the representation of the facing head came from the famous Syracusan dies of Euclidas and Cimon, which date from the years immediately preceding the close of the fifth century. We have noticed a similar and contemporary innovation (of very wooden style) at Barce under the later magistrate **ΑΚΕΞΙΟΞ**. Given the date of the Syracusan

⁷⁹ *Z. f. N.*, vii, p. 29.

pieces, the appearance of the facing head at Cyrene may be dated round the year 400. It may be interesting to collect the various examples of this rare type. Besides the one mentioned above, we have these three.

48. *Obv.*—Head of bearded Ammon facing, laureate, slightly turned towards the r., the beard hanging in curls, the hair not so free as on No. 46.

Rev.—Silphium with two whorls and five umbels;

K	V
P	A
N	A

Collection of Herr Giesecke. *AR.* 0.95. Wt. 203 grs. Samian tetradrachm.

49. *Obv.*—Head of bearded Ammon facing, slightly turned to the l., hair and beard freely curling, wearing diadem with uraeus; around, laurel wreath.

Rev.—Silphium with two whorls (of three leaves) and five umbels;

V	⋈
P	A
A	W

B. M. *AR.* 1.1. Wt. 203.8 grs. Samian tetradrachm = M. Suppl. 141 A.

50. *Obv.*—Head of bearded Ammon facing, slightly turned to the l.; no wreath or diadem, hair and beard as on last.

Rev.—Silphium with two whorls (of three leaves) and five umbels; KVPANAIOΞ O retrograde outwards.

Copenhagen. *AR.* 1.15. Wt. 205 grs. = M. Suppl. 141 B.

It is puzzling that of all the coins with facing heads only one bears the name of a magistrate. No. 48 is struck from the same reverse die as No. 46, which bears the name ΝΙΚΙΞ, and when employed for No. 46 the die had rusted. No. 48 therefore is earlier than No. 46, and was presumably struck under the same

magistrate. A similar argument can be applied to No. 49; the reverse die was used in conjunction with a die of **ΑΡΙΞΤΟΜΗΔΕΟΞ**, and, judging by its state, this use took place at a later date. No. 49 was therefore almost as certainly struck under **ΑΡΙΞΤΟΜΗΔΕΟΞ** as was No. 48 under **ΝΙΚΙΞ**. As regards No. 50 we have no linking of dies to go upon, but the head is much simpler than that on Nos. 47 and 49, while the silphium of the reverse resembles in style that on the coins of **ΝΙΚΙΞ**.

During this period smaller denominations are even rarer than at Barce; besides the very uncommon drachm of usual types (the head still on the reverse), the following coin may be mentioned:

51. *Obv.*—Triple silphium; across field **ΑΘ-ΥΝ**; dotted border.

Rev.—Head of Cyrene facing, turned slightly to r. with diadem, under which the hair is gathered in loops along the forehead; around, traces of letters?

B. M. AR. 0.4. Wt. 14.5 grs. Samian triobol.

This piece is of the same denomination as those of Barce described above, Nos. 40–42; the head is presumably that of Cyrene, and so far as one can judge must represent the same conception, full-face, as appears a little later on the small gold coins in profile. For a somewhat similar treatment at Lesbos, cp. *B. M. C.: Troas, &c.*, p. 160, No. 49.

A word may be said about the anepigraphic tetradrachms of this period, which in themselves have rather an anomalous appearance. They may be divided into two classes, those with a magistrate's name but no

ethnic, and those with neither magistrate's name nor ethnic. I am inclined to think that many coins which at first sight seem to fall into one or other of these classes, especially the second, do so only through their condition; in fact, I can find no tetradrachm of which it can be definitely stated that it has no inscription on either side. Of three in the British Museum which seem to be such, the first is in very worn condition, and the other two (the heads on which greatly resemble some of those on coins of Nikis) are so badly struck that though there is no ethnic the place where we should expect the magistrate's name is off the coin. Of those with a magistrate's name, but no ethnic, we may reasonably assume that when the name occurs also definitely at Cyrene or at Barce the coin may be assigned to that place. When the name does not occur elsewhere, the question becomes practically insoluble: of such coins three are worthy of discussion.

52. *Obv.*—Silphium plant with two whorls and five umbels.

Rev.—Head of Zeus Ammon r. (very rough work);
behind **A**; circular incuse.
□

B. M. (double-struck.) *R.* 0.95. *Wt.* 205.2 grs.
Samian tetradrachm.

This piece has already been published by Müller,⁵⁰ who regarded the inscription on the reverse as being **Λ**
ω, and therefore assigned the coin to the Macae, a Libyan tribe. But a closer examination shows that the lower letter is really a double struck **□** (retrograde), and with that vital letter gone Müller's construction

⁵⁰ *M. i.* 344.

falls to the ground. Bompais⁸¹ had already seen, though on faulty grounds, the inherent improbability of Müller's attribution. He brought the coin into connexion with one in his own collection reading **KVPANA**, and behind the head **Λ**. This he regarded as the same as the upper letter on our No. 52, and took both to be the initial of a magistrate's name, perhaps **ΛΙΒΥΣΤΡΑΤΟΣ**. Not recognizing Müller's "mem" as being really a **Π**, he had to explain it as a letter inserted to give the coin currency in Carthaginian dominions. But we may doubt very much whether Bompais' coin ever read **Λ** on the reverse at all. There is a coin in Berlin which as far as one can judge from Bompais' engraving, is from the same dies, and the "**Λ**" behind the head on this seems to be simply a curl exaggerated by a slight flaw in the die. If we recognize the second letter as a **Π** on our No. 52, the first letter cannot be a consonant, and therefore it must be **Α**, the only vowel whose shape makes it a possibility. **ΑΠ** - - then is almost certainly a magistrate; the rough, almost barbarous, style of the coin might lead us to give the coin to Cyrene rather than to Barce, but such an attribution can be only tentative.

Besides this coin there is the very fine stater bearing on the reverse the name **ΛΙΒΥΣΤΡΑΤΟΣ**.⁸² All the specimens of it I have seen come from one obverse and two reverse dies. Müller (*l. c.*) suggests the attribution to Barce for three reasons,—(1) the presence of the uraeus, (2) the symbol on the obverse and the magistrate's name on the reverse, which he compares with the coin of **ΚΥΨΕΛΩ ΤΩ ΦΙΛΩΝ**

⁸¹ *Op. cit.*, pp. 77 seqq.

⁸² *M. i.* 41.

(Muller, i. 324), and (3) the two shoots which occur on either side of the silphium plant,—remarking that there is no coin at Cyrene which offers these criteria. But (1) the uraeus occurs as often at Cyrene as at Barce (*e.g.* under Nikis and Aristomedes); (2) though the symbol on the obverse is a Barcaean touch, the magistrate's name round the silphium occurs under Aristomedes at Cyrene (on No. 46); (3) This form of silphium is really commoner at Cyrene than at Barce. The style of the head and the treatment of the silphium suggest the finer issues of **ΑΡΙΣΤΟΜΗΔΕΟΣ**. On the other hand, the symbol (spray of laurel) on the obverse is rather a Barcaean feature, and the name itself would perhaps suggest Barce, where the population was to a much greater degree mixed with the indigenous stock. The uraeus which is worn has a curious peculiarity; it seemingly does not rise from a diadem, but appears to be fixed in the middle of something more rigid (rather like a stephane), which encircles the brow but not the back of the head. The following coin may also possibly belong to **ΛΙΒΥΣΤΡΑΤΟΣ**.

53. *Obv.*—Head of bearded Ammon l., of rather similar style, without diadem or uraeus; symbol behind head(?).

Rev.—Silphium with two whorls and five umbels; in front r., upwards, - - - **ΡΑΤ** - - -.

E. T. Newell. R. 1.05. Wt. 178 grs. (cleaned).
Samian tetradrachm.

Unfortunately, the necessary cleaning of this coin has reduced it considerably in weight; at the same time most of the surface is gone, so that it is impossible to make out what the reverse inscription was, or whether the remains behind the neck on the obverse

are really traces of a symbol. If they are, it must be just such another symbol as on the coin above, while the remains of the reverse inscription suggest [ΛΙΒΥΞΤ]ϣΑΤ[ΟΞ]. Since the above was in type, however, Mr. Newell informs me that, having re-examined the coin, he thinks the letters are more probably ΟΛΤ.

E. S. G. ROBINSON.

(To be continued.)

III.

SOME IRREGULAR COINAGES OF THE REIGN OF STEPHEN.

I.—COINS STRUCK FROM ERASED OBERSE DIES.

(PLATE VII. 1-6.)

IN the *Silver Coins of England*, Hawkins assigns these coins to partisans of the Empress "who wished to use Stephen's dies, but not to acknowledge Stephen's title", and this view is now, I believe, prevalent; in his account of the Sheldon Find (*Brit. Num. Journ.*, vol. vii, pp. 59 ff.) Mr. Andrew goes further, and sees in the various countermarking crosses personal badges or devices, attributing coins of various mints to various magnates, those of Nottingham to Peverel, those of Thetford to Bigod, &c.

The obverse dies from which these coins were struck were countermarked in various ways: by a network of cuts [PL. VII. 1]; by a cross cut, or perhaps punched, on the die [PL. VII. 2, 3, 5]; by an incision and a small cross [PL. VII. 4]; or by two lines cut across the die [PL. VII. 6]; by whom or for what purpose this erasure was made is very difficult to understand. The attribution to barons hostile to Stephen not only assumes their usurpation of the privilege of coining, which is an assumption justified by contemporary documents, but attributes to them so keen a desire to publish their

disregard of Stephen's claim to the throne that, having somehow come into possession of royal dies and thereby of a safe means of making considerable profit by coinage, they hazarded the possibility of passing their coins into currency for the sake of issuing a manifesto against Stephen's sovereignty. The Empress certainly had devotees who fought seriously for the Angevin cause, but they were few and were mostly magnates of the western counties, such as Robert of Gloucester, Brian Fitz Count, &c., whereas these countermarked coins seem to have been issued mostly in the eastern counties (at Nottingham, Norwich, Thetford, Stamford; Bristol is an exception), where the barons were for the most part, if not loyal to Stephen, either supporters of the party from time to time favoured by fortune, or fighting for their own personal profit. Peverel,¹ for instance, the owner of Nottingham Castle, seems to have been originally on the side of the Empress, and to have come over to Stephen about the time of the ratification of the treaty with Henry of Huntingdon at Nottingham; hence Robert's attack on Nottingham in 1140 at Ralph Paganel's instigation. In 1141 Peverel was one of the prisoners taken at the battle of Lincoln, and handed over his castle to the Empress to redeem his person. Geoffrey of Mandeville is, of course, an extreme case of the time-server, but no doubt many of the barons acted on the same principles though less successfully. Though not impossible, it seems to me unlikely that dies captured by barons such as these would have been so countermarked for manifesto

¹ See Ramsay, *Foundations of England*, vol. ii, pp. 373, 394, 401, 402, and references there given.

purposes as to risk the acceptance in general currency of coins which, if struck from the dies uncountermarked, would certainly pass unquestioned.

The assumption that the countermarking of the coins had for its object the obliteration of the king's figure cannot be accepted without question. That it effects this purpose is certainly true in some cases: on the Bristol coins [PL VII. 1] nearly the whole obverse is obliterated; on the Norwich and Thetford coins [PL VII. 2, 5] the king's figure is thoroughly obscured; on the Nottingham coins [PL VII. 3] partly; at Stamford [PL VII. 4], from which mint we have coins struck from the same obverse die prior to the countermarking, the countermarks do not obliterate the king's image at all. The York coin [PL VII. 6] must, I think, be considered as coming in a separate category, as the dies are extremely coarse, and may have been contemporary forgeries.

The weight of these countermarked coins varies; the two known coins of Bristol weigh 23.2 and 20.2 grains; of Norwich I have the weight of three coins only (many specimens are known), and these weigh 17.5, 19.5, and 21.1 grains; the Nottingham coins seem always to be light, and vary between 14 and 17 grains; one of the two known Stamford coins weighs 14.8, the other is a fragment weighing 13.8 grains; two coins struck from the same obverse die before it was countermarked weigh 17.7 and 15.2 grains. A Thetford coin in the British Museum weighs 15.7 grains; I do not know the weight of the specimen figured in the accompanying plate (Sotheby sale, 26. vii. 11, lot 553). The coins have been found in the Nottingham, Dartford, and Sheldon hoards, that is to say, they are doubtless con-

temporary with the uncountermarked coins of the same type—the first of Stephen.

It seems to me not unnatural to attribute this countermarking, or erasure, of obverse dies to an intention to put the die out of action, in just the same way as dies at the present day, if kept, are obliterated by some mark in order to prevent them being used for forgery. I am inclined, therefore, to assign the countermarking of these dies, not to an enemy who had obtained possession of them, but to the original and lawful holder of them, that is to say, to assume that the *monetarius* or *custos cuneorum* in this way rendered his dies unfit for further service in fear of their capture by the king's enemies. By the obliteration of the obverse, or standard, dies the reverse, or trussel, dies would be rendered useless, and so the enemy would not, if he captured the mint, have easy means at his disposal of imitating the king's coinage. One can well imagine occasions among the many raids and sieges of this period (such, for instance, as Gloucester's attack on Nottingham in 1140) when such a danger may have been imminent. Whether it would have been easier in an emergency of this sort to destroy the dies completely, I am not prepared to say; if so, the method of obliteration may perhaps have been preferred in order to retain the alternative of using the erased dies again in case they were not seized by the enemy or of denouncing the currency of the countermarked money in case of their capture. However this may be, it is evident that, if my suggestion is right, these dies were put to use after the erasure was made, whether on behalf of the king or his enemies it is impossible to say; in some cases the good weight

and good metal of the coins point rather to the king's moneyers as the makers, while other coins, notably those of Nottingham, show the low standard of weight that is more consistent with a baronial coinage.

II.—COINS WITH INSCRIPTION **PERERIC**, &c.

(PLATE VII. 7, 8.)

The original attribution of these coins by Mr. Rashleigh (*Num. Chron.*, 1850, pp. 165 ff.) to the Earl of Warwick was shown to be untenable by Mr. Packe (*Num. Chron.*, 1896, p. 64), who offered an alternative baron as the issuer of this coinage.

In *Brit. Num. Journ.*, vol. vii, pp. 81 ff., Mr. Andrew asserts that Stephen himself and the Empress Matilda were the only persons who could have issued so widespread a coinage. Stephen he rules out as impossible, "for his name and title have no break in their sequence,"² and so by a process of elimination he arrives at the conclusion that Matilda struck these coins. From the coins he reaches the same conclusion by an interpretation of **PERERIC** and **PERERICM** as a mutilated form of *Imperatricis*. I am unable to feel convinced by this ingenious interpretation of the legend; and, while I agree with Mr. Andrew's proposition that no other person than Stephen or the Empress can have issued this coinage, I cannot accept the Empress as a possible candidate for this distinction. Her movements during the brief period of her success are well known: her movement from Gloucester, where she received Stephen as prisoner, to Cirencester on Feb. 13, 1141, and her negotiations there three days later with the

² A *petitio principii*, for this is the subject of the inquiry.

Legate; her conference with the Legate on March 2 at Wherwell, near Andover, and arrangement of terms for securing the throne; her arrival at Winchester the following day, her hallowing there as "Lady and Queen" of England; her delay at Oxford, Reading and St. Albans, while the Londoners are persuaded to accept her; the final consent of the Londoners a few days before June 24, and her admission to Westminster; the disgust of the Londoners at her demand of a subsidy, refusal to grant the good laws of the Confessor, &c.; the arrival of Queen Matilda and William of Ypres with an army raised in Kent, and their admission on June 24 by the Londoners; the flight of the Empress; her siege of Winchester on July 31, and her own defeat by the army of William of Ypres and escape (Sept. 14) through Ludgershall and Devizes to Gloucester; the capture of Robert of Gloucester and his exchange for Stephen; the stay of the Empress at Oxford for the winter of 1141-2, and her move to Devizes in March, and the sending of an embassy to urge her husband to come over; the arrival of Duke Henry at Bristol in late autumn; the siege of the Empress in Oxford by Stephen from September to December 1142, and her flight at Christmas to Abingdon and thence to Wallingford, which practically closes her active career in the war, which at this period commences to be fought on behalf of her son's claim to the throne instead of her own.

The coins are known of the Bristol, Canterbury, Lincoln, London, Stamford, and perhaps Winchester, mints. At Winchester coins might have been issued in the name of the Empress after her hallowing as Lady and Queen on March 3, 1141. She was at London only a few days; but it is perhaps not impossible for

dies to have been made for her in that short time. So far as we know, the Empress was never at Canterbury, Lincoln or Stamford, and never in a position to employ these mints. Canterbury castle was in the hands of Robert of Gloucester's men in 1135, and refused admission to Stephen; but the mint was evidently in his hands at this period, since Canterbury coins of his first type are not uncommon, and there is no reason to suppose that it ever fell into the hands of the Empress. She did not go there, and it was in this part of the country that troops were raised by Stephen's queen and William of Ypres. Lincoln castle was in the hands of Ralph of Chester; it was seized by him in 1140, and remained intact through the sacking of the town after the battle of Lincoln; Ralph surrendered it to Stephen in 1146. Stamford was apparently always in the king's hands until it surrendered to Henry in 1153.

The coins are of good weight, varying from 19 to 23 grains, and apparently of good quality. Their style is quite regular, and cannot be distinguished from that of the ordinary coins of the reign. They are made with the usual punches of the period, and by the moneyers whose names appear at these mints on Stephen's coins. Their strong contrast with the coins of the Empress may be seen by comparing on the plate these coins [PL. VII. 7, 8] with those of Matilda [PL. VII. 9, 10].³

Hence the following dilemma arises: if they are to be attributed to the Empress they are either earlier or later than her named coinages, which are coarse and rough in workmanship. Therefore, they either

³ With regard to the reverse of the coin figured as PL. VII. 10, see below, p. 114.

show, if earlier, that Matilda's coinage is at the same time progressive in orthography and retrogressive in style, or, if later, that it is progressive in style while retrogressive in orthography.

It seems, then, that these coins, from their style and quality and their places of mintage, must be regarded as, for a period, the regular coinage of the realm, that is to say, the coinage issued by the authorities of the king's mints. At the time of Stephen's captivity, the anarchical condition and the uncertainty of events, which gave many barons the opportunity to sell their allegiance at a high price, caused some at least of the ecclesiastics, so William of Malmesbury tells us, to attach themselves to the Empress's side after obtaining Stephen's permission to temporize. The position of the mint officials, we may well suppose, was a most difficult one. The coins which they issued, bearing as they did the names of the moneyers, must in future time be positive evidence of their loyalty or disloyalty at this crisis. If, as seemed probable, the Empress were to obtain the throne, the issue of coins in Stephen's name would convict the moneyers, and with them the other officials, of active sympathy with the deposed king; on the other hand, should Stephen regain the throne afterwards, their loyalty to Matilda during the period of her ascendancy would, if they struck coins in her name, presumably be properly punished on his return. I am therefore disposed to believe that the mint officials, like the clergy, temporized, and that they put on the obverse of their coins an inscription which was as unintelligible to contemporaries as it is to students of the present day. It would thus at least be possible to prove to both the king and the Empress

that they did not at this time issue a coinage in the name of the other, and at the same time the quality and good appearance of their coinage would prevent it being questioned by a public which was then for the most part illiterate. The dependence of the provincial mints upon the central authority at London, whether they received their dies from London or only received instruments and orders from there at this period, would account for the uniformity of this inscription at mints so far distant from each other, a peculiarity for which I am at a loss to account if the inscription is to be considered as even a stereotyped blunder of *Imperatricis*. (It always occurs as **PERERIC** or **PERERICM**; Mr. Andrew gives also **PERERICI**, which I believe to be a misreading of a coin from the same die as others which read clearly **PERERICM**.) I venture to think that a parallel for this temporizing use of a meaningless inscription may be found in the Danish coinage of 1144-7, the period of the struggle of Magnus and Swein; some coins of this period are figured and described by Hauberg (*Myntforhold og Udmyntninger i Danmark*, p. 49, and Pl. viii. 1-7) which bear the unintelligible name **IOANST** with the title **REX**.

III.—COINAGE OF THE EMPRESS MATILDA.

(PLATE VII. 9, 10.)

I have introduced this coinage here chiefly with a view to showing its contrast with the **PERERIC** coinage, and its connexion with that bearing the name of Henry of Anjou.

The Empress's coins are all of poor, clumsy work, the dies being evidently engraved without the assis-

tance of the usual punches, with the exception of the reverse of her Oxford coins, one of which is figured on PL. VII. 10. The reverses of these Oxford coins⁴ are the only specimens of Matilda's coinage that I have seen which have the least resemblance in style to the regular coins of Stephen, and in this isolated case the resemblance is so striking, and the evidence of the use of regular punches in the making of the dies is so strong, that I am disposed to believe that at some time the mint establishment at Oxford with its officials and instruments fell into the Empress's hands. This is most likely to have happened at Easter 1141, when Robert d'Oilly surrendered his castle to her, and she remained for a time at Oxford before proceeding to Reading and St. Albans. Other occasions on which she might have struck coins at Oxford are after her flight from London in June 1141, or when she was besieged there by Stephen from September to December of the following year; but the occasion of her triumphal progress to London, and the surrender of the castle of Oxford to her, seems the most probable.

Other mints that can be discerned with some certainty are Bristol and Wareham, neither of which affords any evidence of the date of her issues, as both places were in her hands during the greater part of the civil war, though Wareham fell into Stephen's hands for short periods in 1138-9 and 1142. The mint-

⁴ Two specimens are known, one in British Museum (the specimen here figured), the other in Mr. H. M. Reynolds's collection (Rashleigh sale, lot 630); these coins are struck by the same moneyer, Sweting, who also struck coins of Stephen's first issue, and are from different dies; in both cases the obverse is of the usual coarse work of the Empress's coins and the reverse of the normal punched work of Stephen's regular coins.

reading **CA** - - - is open to many interpretations.⁵ I have already said that Canterbury does not seem to be a possible mint for the Empress to have used. I am inclined to attribute this reading to the borough of Calne in Wiltshire.

The coins are usually of low weight: those of which I have obtained the weight vary from $15\frac{3}{4}$ to $18\frac{1}{2}$ grains. The obverse inscriptions are more or less abbreviated forms of *Matildis Comitissae, Imperatricis* or *Matildis Imperatricis*.

The coinage of the Empress may be assumed to have commenced any time after her arrival in the autumn of 1139. As the later limit of its issue I suggest the second half of the year 1142: my reasons for this I can better explain when I deal with the coinage of her son.

IV.—COINAGE OF HENRY OF ANJOU.

(PLATE VII. 11-16.)

A coinage by Henry of Anjou, which was known as "the Duke's money", is mentioned by Roger of Hoveden in the following passage:

"Anno gratiae MCXLIX, qui est XIII regni regis Stephani, Henricus dux Normannorum venit in Angliam cum magno exercitu, et reddita sunt ei castella multa et munitiones quamplures; et fecit monetam novam, quam vocabant monetam ducis; et non tantum ipse, sed omnes potentes, tam episcopi quam comites et barones, suam faciebant monetam. Sed ex quo dux ille venit, plurimorum monetam cassavit."

⁵ The Canterbury coins of the **PERERIC** issue read + **PILLEM**: **ON: CANP**: which does not, I think, admit of more than one interpretation.

In his introduction to Hoveden's *Chronicle* (Rolls Series, No. 51, p. 1), Stubbs says of this passage, which appears to be an original statement, and not, like most of the period 1148-69, copied from the *Melrose Chronicle*:—"The notices of the years 1148 to 1169 which are neither taken directly from the chronicle of Melrose, nor connected closely with the Becket context, are very few, and some of them, I think, of very questionable authenticity . . . Of the striking of money by Henry in 1149, called 'the duke's money', and of the appointment of Henry as justiciar to Stephen in 1153, it is impossible to say that they are false, but equally impossible to say that they are in the least degree probable."

However, it has since become possible to attribute some coins, I think with certainty, to the Duke Henry. They have at one time been attributed to King Henry I, an attribution inconsistent with finds of these coins and their style, &c.; at another time to Henry, Earl of Northumberland, who could not have struck coins at Bristol and Hereford, at which mints some of these coins were certainly struck; but their attribution to Henry of Anjou is now generally accepted.

These coins are always of low weight, varying from $12\frac{1}{2}$ to $17\frac{1}{2}$, usually 15 or 16, grains, and of coarse work, though usually of better execution than those of his mother, the Empress. They may be roughly divided into two issues, (I) with profile bust, (II) with bust full-face; these being subdivided into I *a* with reverse of Stephen's first type [Pl. VII. 11], I *b* similar reverse, but variant with voided cross moline and annulets inserted [Pl. VII. 12], I *c* with reverse similar to Henry I's last type [Pl. VII. 13]: the form of bust, and espe-

cially the shape of the crown, frequently varies on this type; II *a* with reverse as I *c* but pellets in place of fleurs on limbs of cross and angles of quadrilateral [Pl. VII. 14, 15]—there are again varieties in style of bust—II *b* similar to preceding, but cross on reverse voided. The mints possible of interpretation are:—Of type I *a* Hereford, of I *b* Gloucester, of I *c* **CRST**, for which I suggest Cirencester in preference to Christchurch, which was at this time, I think, the name of the monastery only, the place being still called Twynham: of II *a* Bristol, where the same moneyer's name, Arefin, occurs on both the Empress's and the Duke's coins, Sherborne (?), Wiveliscombe (?).

Henry of Anjou visited England on four occasions during Stephen's reign:

(1) Late in 1142, sent by his father to Bristol, where he stayed four years, returning to Normandy in 1146.

(2) Spring, 1147, with a small band of adventurers. Failing in his attacks on both Cricklade and Bourton (Gloucestershire?), he returned in May of the same year.

(3) Early 1149, apparently to be knighted by King David. He landed at Wareham, was at Devizes on April 13, and was knighted on May 22 at Carlisle. We know nothing of the rest of his movements till his return in January 1150.

(4) January 1153, with a force said to consist of 150 men-at-arms and 3,000 foot-soldiers. Reduced keep of Malmesbury, and raised siege of Wallingford (the object of his expedition), visited Bristol, and made an armed progress through the Midlands. After the death of Eustace, the son of Stephen, in August 1153, negotiations were begun and culminated in the Treaty of Wallingford, ratified at Winchester on November 6, 1153.

To return then to Roger of Hoveden: the statement that there was a coinage of Henry of Anjou is obviously true. At the same time, it is equally obvious that the whole of the phrase which I quoted above is confused in respect of chronology: it was not in 1149, but in 1153 that the Duke came with a large army and reduced several castles. Similarly, too, if Henry issued his coinage during the visit of 1149, *i.e.* between early 1149 and January 1150, and if all the magnates, earls, barons and bishops alike were making their own coinages, it could not have been during the same period, 1149-50, that he suppressed their issues. Hoveden has evidently no clear knowledge of the four several visits of Henry, and has apparently, after confusing the last two visits, made a perfectly true statement, that there was a coinage in Henry's name, and also irregular coinages of various magnates which Henry (presumably at a later visit) suppressed.

Mr. Andrew, *Brit. Num. Journ.*, vol. vi, pp. 365-6, has assigned the profile types of Henry to the visit of 1149, and the full-face types to that of 1153; but, in spite of the statement in Roger of Hoveden, I should move the whole of the Duke's coinage to an earlier date. His use of the type of the first issue of Stephen is probably due to the use of that type by his mother, and I think that the coinage of the Empress and Henry form a more or less continuous currency in the Angevin part of the country. Matilda probably continued to issue coins in her own name until the second half of 1142, when her claim to the throne was abandoned on behalf of her son. This change in the object of the Angevin party is pointed out by Round (*Geoffrey of Mandeville*, pp. 184-6), who notices the

important guarantee in the charter of the Empress to Aubrey de Vere, not later than June 1142, that she would obtain her son's ratification; and this ratification was given in Henry's confirmation in a charter which is attributed to July–November 1142. It is clear that, about the time of Henry's first visit to England, the Empress abandoned her own claim to the throne, which was evidently hopeless, and from this time played an inconspicuous part while her party was held together not by, but in the name of, the young Duke Henry.

It is to this period that I should assign the earliest issue in the Duke's name. Were this issue so late as 1149 I think it unlikely that it would have been modelled on the first coinage of Stephen, for that would by then no doubt have been superseded in currency, and the coinage of the Empress would, if it continued so long, have probably changed its type, as indeed that of Henry does later. The finds of Henry's coins, I think, point to this conclusion. Their absence from the Awbridge find gives one reason to suppose that his coinage was recalled either after the Treaty of Wallingford or after his accession, and I do not therefore think it likely that his full-faced issues and the imitations of them in the name of William (whoever he may be) and other magnates can be placed so late as 1153. A representative selection of coins from the Winterslow find (c. 1804)³ seems to have found its way

³ I attach no importance to the statement in Sir H. Ellis's *Introduction to Domesday Book* that this find contained "a large assemblage of pennies from the Saxon times to the reign of Stephen", because this statement, in itself so very improbable, is easily explained by the attribution at that time of coins of Henry of Anjou to Henry I, and of coins of William (the baronial imitations of Henry of Anjou's coins) to William I and II.

into the B. C. Roberts collection, and thence the find is known to have contained coins of the first three of Stephen's types, and of all the varieties of Henry of Anjou's two types except *I a*. The absence of coins later than Stephen's third type from the Roberts collection does not prove their absence from the find; but, in conjunction with the absence of the Duke's coins from the Awbridge find, the evidence tends to show that the Henry coins should be placed earlier than 1153. One coin of Henry of Anjou, type *I a*, in the Bute find, which contained a few coins of Stephen, of the first type only, with some Scottish coins, seems to me to be positive evidence of the issue of this coinage at least as early as the latter part of 1142.

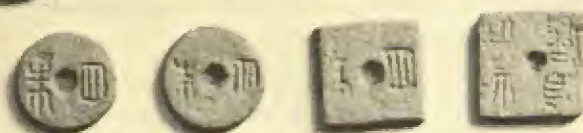
I do not think that the interpretation of the mint-names on these coins would help in any way to date the coinage. I consider that these issues, in the name of Henry represent less a personal issue of his own than the coinage of the Angevin party in England continuing that in the name of the Empress, issued first towards the end of 1142, and changed in type, from profile to full-face, probably not many years after 1145.

G. C. BROOKE.

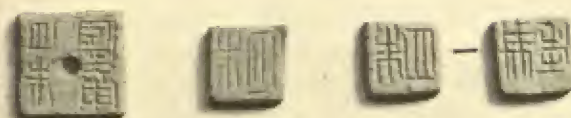
IV.

THE ANCIENT COINS OF LIN-TZU.

1 2 3 4 5



6-9



10

11

12

WHEN we consider the long and uninterrupted numismatic history of China, which covers a more extensive, continuous, and unbroken period than that of any other country, it will perhaps come as a surprise to hear that there is known but one series of Chinese coins where the principal inscription appears incised instead of in relief. We were so far only acquainted with its existence, since all other information, excepting the value, had been hitherto lacking. Further par-

ticulars about these coins, which have now been assigned to the ancient city of Lin-tzu (臨淄), will no doubt be considered of sufficient interest to merit being here minutely recorded.

It is true that the well-known series of beautiful round bronze coins, made by the famous usurper Wang Mang (王莽) about A.D. 9-23, with raised characters reading "Ta tsien wu shih" (大泉五十), or "Great coin worth fifty", counts among its numerous issues one in lead where this inscription is found incised; but as the legend is the same in all of them, it cannot rightly claim to be regarded as a separate series, since it is but a variety of the regular type.

I had in my hands a few years back at Hsiang fu (西安府), the site of the ancient capital of Kuan Tehung (關中), a flat circular bronze coin, shaped after the Yuan fa (圓法) series of early round money, with the two characters incised on either side of the central round hole; but as this particular specimen appeared to me suspicious at the time, I did not take the trouble to investigate it further, and only mention it as it was probably the copy of some genuine original. Perfectly different was another and larger piece, apparently authentic, which I had submitted to me at Tientsin last year. It had also two incised characters different from those in the above, placed one on each side of the central circular aperture, but I was unfortunately unable to retain it long enough in my possession to allow a rubbing to be taken, or even closely examine it as carefully as it required, so that I can no more than allude to it here. The above-cited instances are the only cases, to my knowledge, where the principal inscriptions are to be found incised on

any of the ancient Chinese coins issued for currency purposes.

Certain specimens of the ku pu (古布) or weight money of the city of An Yh (安邑) are sometimes found with the incised ideograph for Kiu (莽), written in an archaic style on the under side, but as this additional mark was afterwards incised by hand to serve only as a further guarantee to the coin itself, since its meaning is "Treasury" (weight), it cannot be considered as other than a counterstamp. Some of the early round coins of that country are also often found with a character or other symbol, generally incised on the reverse side, to serve as a distinguishing mark to differentiate the various issues. Such additional signs, usually a numeral added after the coins were made, can scarcely be regarded as forming part of the original legend, and consequently need not further occupy our attention here.

In view of the trials that Sino-archaeologists experience in determining the date when inscriptions were incised on Chinese bronzes, specially in the case of ancient swords and other warlike weapons, it is fortunate for numismatists that coins of that country with incised legends are not numerous. We are only too well acquainted with the many difficulties which must first be overcome before we are able to ascertain correctly if such inscriptions were contemporaneous with the casting of the piece or added afterwards at a later period. As such inscriptions increase the value, both commercial and scientific, of all objects thus treated, this deceptive practice can readily be accounted for.

If I am not mistaken, the only numismatic work,

native or foreign, that includes any examples of the Lin-tzu series of coins with incised inscriptions, is the Ku Chuan Hui (古泉匯). Its learned author, Li Tso-hien (李佐賢), mentions that he had seen but two specimens, both of which are illustrated. They appeared to him authentic, but he did not know where or when they were made, nor could he give any other particulars about them. He was also unaware that the square varieties existed, and the two known to him belonged to the more common circular issue, both with the same value inscription, but slightly differently written in each case. They correspond to the group which includes No. 2-7 illustrated in the figure which accompanies this article. It is no wonder that this eminent numismatist, perhaps the most critical that China has ever produced, was nonplussed, and unable to attribute them. The legend, consisting only of a value inscription, was not sufficient by itself to permit of many conjectures. It is only with the appearance of further specimens bearing the two additional characters indicating their place of origin that we have been able to assign them to the ancient city of Lin-tzu and surrounding locality.

Lin-tzu, in the old state of T'si (齊), is one of the most ancient and best-known cities of early China. We find it referred to in various native works as a place of considerable importance, both powerful and wealthy. Playfair, in his *Cities and Towns of China*, mentions it under No. 3895, as situated in lat. $36^{\circ} 55'$, long. $118^{\circ} 32'$, in Ching Chou-fu (青州府), which is now modern Shantung (山東) province. Neither the Yellow River nor the Grand Canal touched Shantung in those days, and Lin-tzu was evidently situated with reference

to the local rivers, which flowed into the Gulf of Pechili, so as to take full political advantage of the salt, mining, and fishing industries. We have a full account of how the statesman-philosopher Kwan Tsu (管子), about 650 B. C., reconstructed the economic life of both people and city. The boastful statement attributed to the deformed philosopher Yen Tsu (淵子), who in 560 B. C. visited the court of the semi-barbarous state of Ts'u (楚), when he took the opportunity of enlarging upon the magnificence of this city, is worth quoting in full: "It is," said he, "surrounded by a hundred villages; the parasols of the walkers obscure the sky; their perspiration runs in such streams as to cause rain; their shoulders and heels touch together, so closely are they packed." As Parker says in *Ancient China Simplified*, "Exaggerations apart, however, there is every reason to believe that Lin-tzu was a magnificent city."

The coins of Lin-tzu known to collectors are of two distinct shapes—round and square. As the former have so far been the only varieties edited, those of a square shape are, I believe, here recorded and described for the first time. They are the more interesting of the two, as some of them have the name of the place of issue inscribed on their surface besides the weight value. Twelve specimens, comprising examples of most of the known varieties, of both round and square issues, will be found reproduced in the accompanying figure.

Of the round coins there are two sizes. They all bear on the obverse the same incised inscription Sze Tchu (四朱), or "Four Tchus", on each side of the central circular aperture. The reverse or under sides,

with the exception of the one below mentioned, are flat and uninscribed. The largest of the circular varieties, reproduced over No. 1, is of the greatest rarity, one other specimen only being known to exist. It is a thick piece, one of the thickest that I have so far seen (3.5 mm.), with what might be termed a raised edge or border on the outer circumference of the reverse or under side, forming a sort of rim, coin fashion, which is not shown in the figure. The smaller varieties, Nos. 2-7, which are the commonest type, are flat on both sides. It will be noticed that they are all more or less of the same size, having also a uniform thickness of 2 mm. The manner of writing the inscriptions, in a bold and pleasing style, shows but little variation, excepting perhaps No. 2, where the character Tchu is differently fashioned, and may have been the work of a distinct engraver.

The square series comprises various issues, each of which must be treated separately. Nos. 8, 9, and 10, of an average thickness of 1.5 mm., have the central aperture in the same position as in the round series. Like them, they also have flat and blank reverses. In No. 8, which might be considered as the connecting link between the round and square shapes, the value inscription "Tze Tchu" alone adorns this specimen, while in the two following, Nos. 9 and 10, the two characters for Lin-tzu are engraved on the right and Tze Tchu on the left of the central hole. The remaining specimens, Nos. 11 and 12, averaging 3.25 mm. in thickness, are markedly different from any of the three preceding square varieties, and present several distinct and unusual features. The hole in both cases has been bored lengthwise, perforating the side edges instead of

from top to bottom, as in all the others. On account of the thickness, these punctures are comparatively small, but yet sufficiently large to allow a thick thread to be passed through. No. 11 has the ordinary value inscription Tze Tchu occupying the entire surface of the obverse or upper side, while the reverse or under side is flat and devoid of any inscription whatever. No. 12 will be seen to have on the one side, or reverse, the value inscription Tze Tchu written identically as in No. 11, but with the addition on the other side, or obverse, of a perfectly different name-legend from that of Lin-tzu, as found on coins Nos. 9 and 10. This is the only instance, to my knowledge, where inscriptions are to be found on both the obverse and reverse sides of these incised coins. The name here consists of the character Tson (驛), written in the same archaic style as that employed on the Lin-tzu series. There is a city of this same name, not so very far distant from Lin-tzu, which was formerly to be found on lat. $35^{\circ} 30'$, long. $117^{\circ} 10'$, in Yenchou fu (兗州府), also in the modern province of Shantung; it is mentioned by Playfair under No. 6576. My friend, Mr. Mikami (三上) of Tokyo, who has also a similar piece in his collection, is of opinion that this inscription stands for the name or sign of some individual or trading concern. Should this turn out to be the case, which is not at all probable, it would be the only instance where the name of a person or business concern is found on any of the coins of China. We know that commercial and other guilds, and, perhaps, even private traders, were in the habit of issuing money during those early periods, but such pieces always bore the name of the city and not that of any

individual. The general practice of free coinage was not forbidden until 135 B.C., when the government exercised the sole prerogative of supplying the circulating mediums required for currency purposes.

The patination, both in the square and round varieties, is more or less uniform in all the specimens here dealt with. The smooth and polished surface in the majority of cases and the rounded edges show that they had been subjected to a considerable amount of use during some early part of their existence. The form of writing the inscriptions, in an archaic style of the period, is considered as of the best, and certainly no ignorant person was employed in writing these characters. Both the incising of the inscriptions and the boring of the holes appear to have been done afterwards by hand, as no two are ever found to be exactly alike.

I have purposely left until the end one of the most important considerations in connexion with these coins, which must be fully investigated before their study can in any manner be regarded as complete. I refer to their weight. The specimens in my collection, all marked with the weight-value Tze Tchu, give the following results:

No. 1.	Large size circular piece	. . . . .	5 grammes
" 2.	Ordinary size circular piece	. . . . .	2 "
" 3.	" " " "	. . . . .	2.1 "
" 4.	" " " "	. . . . .	2 "
" 5.	" " " "	. . . . .	2.3 "
" 6.	" " " "	. . . . .	2.5 "
" 7.	" " " "	. . . . .	2 "
" 8.	Medium size square piece	. . . . .	1.9 "
" 9.	Large size square piece	. . . . .	2.5 "
" 10.	" " " "	. . . . .	2.3 "
" 11.	Small size square piece	. . . . .	2.9 "
" 12.	" " " "	. . . . .	2.4 "

From the above figures we arrive at the following averages:

Large size round piece, 5 grm.	} Average of round pieces, 3.5 grm.
Ordinary size round piece, 2.1 grm.	
Medium size square piece, 1.9 grm.	} Average of square pieces, 2.3 grm.
Large size square piece, 2.4 grm.	
Small size square piece, 2.6 grm.	

The average weight of all the specimens, both round and square shaped pieces, is 2.9 grammes, and without No. 1, which is double the weight of any of the others, the mean average would be 2.2 grammes, which figure is probably the nearest computation to the correct general weight. It will be seen by the above table that there is quite a difference between the lightest piece (No. 8 with 1.9 grms.) and the heaviest (No. 1 with 5 grms.), to which great discrepancy I would here like to call attention, as it will be referred to later.

With the exception of No. 1, which is cast, all the specimens in my collection, as well as those which I have been able to examine elsewhere, appear to have been cut to shape from a larger planchet. This process would allow of more accurate results as regards the weight, since by the old primitive method of casting no such regularity could be maintained. In the various groups—ordinary round size (Nos. 2-7), larger square size (Nos. 9-10), and the smallest square size (Nos. 11-12)—there is very little to choose between the individual weights of each coin. But the difference between the average weight of the various groups themselves is so pronounced that there must have been a reason for this comparatively great divergence. Besides the natural indication that these distinct groups formed

different series, where each individual coin approximately maintained its own standard, it may also be that they were issued at different periods, if not in different localities. Anyhow, the times of their issue could not have been widely separated, as the workmanship, manner of writing the inscriptions, metal, &c., show little variation in all the groups.

It has been suggested that these small inscribed pieces of copper were only weights, and had no connexion with currency, the square-shaped issues, and specially Nos. 11-12 with the hole edgewise, lending strength to this theory. On the other hand, the evidence from the circular specimens with a round central hole for stringing them together, would more than counterbalance the foregoing consideration, since no more faithful representation of the early round coins of ancient China could be found than the one figured over No. 1. Again, should they have been merely weight-measures, it would be difficult to account satisfactorily for the great difference in their actual weights, which in such a case would be more uniform, the more so when it is considered that the process by which they were made lent itself to a certain degree of accuracy. Experience with the early round coins of ancient China, besides, teaches us that the value inscription may at the beginning have been the actual weight, but as time went on this indication became merely a nominal legend. In the latest issues the weight was almost infinitesimal, and bore no recognized relation to the original weight.

In conclusion, I will remark that the square coins of Lin-tzu with an incised inscription, which is the rarest of the two shapes, have already been imitated.

I have seen a most dangerous forgery of the piece described in this article under No. 10. Unless compared side by side with a genuine specimen it would be difficult to detect that it is spurious. The weight, as is generally the case with imitations of the early issues of China, is a good deal heavier than that of the original, the piece in question weighing a little over 3 grammes, with an exaggerated thickness of 3 mm. One cannot help admiring, if not respecting, the activities of Chinese forgers, since it is quite remarkable that it should occur to them to issue imitations of a coin which had not yet even been edited!

H. A. RAMSDEN.

Note.—Owing to the Author's regretted death, this article has not had the benefit of his revision.

MISCELLANEA.

HELENA N.F.

M. MAURICE in his paper¹ raises a new point, and perhaps I may have leave to make a very short comment thereon. Before doing so, I desire to say that I have not denied the existence of Helena the younger, but only that her name or effigy has yet been found on any coin. The new arguments which M. Maurice skilfully raises against me are based on the fine bust which he illustrates, on a specimen of the N.F. coin which bears a more youthful portrait than the specimen which was illustrated in the *Numismatic Chronicle* in 1912 (Plate XXI, No. 1), and on the remarks of Lady Evans in her paper quoted by him. But has he not fitted his evidence to his conclusions rather than vice versa? He says that St. Helena "porte toujours deux variétés de coiffures", but his own witness, Lady Evans, adds a third, saying, "Helena sometimes reverts to the simple Greek knot."² Now the assertion that St. Helena used but two varieties of coiffure is only correct if the coins inscribed N.F. are not attributed to her, and the principal reason given by M. Maurice against such an attribution is that they bear a third variety of coiffure. It seems that each assertion requires the other to support it and that the argument proceeds in a circle. In fact, the assertions can be proved only by the authoritative decision of the very point at issue, viz. the correct attribution of the coins bearing the three varieties of portrait.

It is submitted, therefore, that the hairdressing argument fails, and it may incidentally be pointed out that a coiffure resembling that of the bust does not appear on the ordinary coinage of the Empress Helena till the posthumous issue of A.D. 337, and even then it differs from that of the bust, in that a row of curls is worn between the bandeau and the forehead, similar to that which appears on the coins bearing the title Augusta; while it must be particularly noted that the corresponding portion of the hair on the bust is treated exactly like that on the N.F. coins; and this, I submit, is a somewhat important aid to my contention. There is no proof of the statement, "Cette princesse aurait adopté, dès le début de sa vie, le genre de coiffure qu'elle conserva toujours." It is contrary to M. Maurice's own evidence, and to his own correct conclusion that the bandeau type was a late

¹ *Num. Chron.*, 1914, pp. 314-29.

² *Ibid.*, 1906, p. 60.

one. If there was any coin struck in her honour before she was granted the diadem in A.D. 325, we must expect to find on it another form of coiffure.

Tertullian objected to woollen bands; what then is more likely than that, when Helena was but a Saint in retirement, she dressed her hair most simply?

I venture also to dissent to the statement, "Nous ne possédons que des effigies de Sainte Hélène âgée, tandis que le buste est celui d'une jeune femme."³ Several of the portraits of the coins of the Augustan series are those of a young woman, and many others show a face much younger than that of St. Helena could have appeared when they were struck, for she was then in her eighth decade. It does not, therefore, appear that the bust must have been carved when she was young, and it is no certain evidence that she wore the bandeau in her youth. Judging only from the photograph, we may even doubt if it is intended to represent a very young woman.

M. Maurice also alleges a difference in feature between the N.F. and the Augustan portraits. I must not repeat the arguments I have already put forward on this point,⁴ but I challenge comparison of No. 6 with No. 11 on his plate, and suggest that the profiles are identical. Also I challenge comparison of the N.F. specimen published on Plate XXI of the *Chronicle* for 1912 with the profile of the bust. I suggest that the brow, nose, and mouth are identical on bust and coin, and that the last-mentioned feature is very characteristic, and is to be found similarly depicted on many coins on both plates, particularly on the N.F. coin of M. Maurice. Again, what female feature could be heavier than the nose of the bust, which, however, may be a reproduction? The chin is less developed than that on the N.F. coins, and though this weaker chin is also found on the coins with the "bandeau", or later coiffure of St. Helena, the strong chin of the N.F. coins is exactly reproduced on most of the Augustan series. Both forms of chin are found on coins undoubtedly attributable to St. Helena.

My most courteous opponent has, therefore, failed to convince me, and I must leave the decision between us in the hands of our brother numismatists.

PERCY H. WEBB.

ALEXANDRE DE BRUCHSELLA, engraver at the Tower mint from Michaelmas, 1494 to Michaelmas, 1509.

In *Num. Chron.*, ser. 4, vol. xiii, pp. 351-3, I communicated to the Society the name of this graver, who was employed at

³ *Ibid.*, 1914, p. 318.

⁴ *Ibid.*, 1912, pp. 355-7.

the Tower until the death of Henry VII in April 1509, but not afterwards, as I then believed. I have, however, since met with clear evidence that Alexandre was retained in his office by Henry VIII for about six months, and consequently we may assume his personal responsibility for the dies used in striking the first coinage in the new reign. The proof of his service being thus extended is based upon an entry in a Memoranda roll of the Exchequer, which runs as follows :

"Writ to the Barons of the Exchequer, Easter term, 1 Henry VIII.

Whereas Alexandre Bruchsellia by commandment to him given 'by our mouthe' has exercised and occupied the office of graver of our coining irons within the Tower from the Feast of Easter in the 24th year of our late father Henry VII until the Feast of St. Michael in the 1st year of our reign, for the occupation whereof we have granted to him the sum of five pounds for the said time, to be taken from the profits of the mint. This sum had been already paid, and the Treasurer and Barons are authorized to allow the amount in the accounts of William Stafford, warden. By privy seal at Greenwich, No. 17 March 1 Henry VIII, 1509-10" (K. R. Mem. roll, No. 289).

A search through the roll of the succeeding year failed to disclose any further mention of Alexandre, a result which was to be expected, as the warrant of privy seal which appointed his successor, John Sharp, states that the office was conferred as from Michaelmas, 1509.

The majority of the gravers of dies and seals were, as is well known, also goldsmiths, and this fact suggests a possibility that the artist who is the subject of this note was identical with one of two goldsmiths who are mentioned by A. Pinchart in *Revue de la Numismatique belge*, 2nd series, vol. ii (1852), p. 223, in a list of gravers in the Low Countries. Pinchart tells us that Albert Durer recorded in his Diary of Travel of 1520-1 that he had met Alexander the goldsmith at dinner in Antwerp. Pinchart then alludes, on p. 224, to the existence of a goldsmith named Alexander van Brugsal, who was known in the Low Countries in 1505-6.

In point of date the last-named craftsman is the nearer to our Alexandre de Bruchsellia, who, if he was a native of Flanders, may conceivably have visited London, when his presence was required at the Tower. Be that as it may, I think that it will be appropriate to repeat here a line quoted by Pinchart when he summed up the case as between the two Alexanders in regard to the authorship of certain Flemish medals:

Devine si tu peux, et choisis si tu l'oses.

I am indebted to Mr. G. F. Hill for drawing my attention to the above-mentioned volume of the Belgian Numismatic Society's publications.

HENRY SYMONDS.



COIN OF CARAUSIUS OVERSTRUCK UPON AN ANTONINIANUS OF PHILIP SENIOR.

The interest of this piece lies in its being overstruck by Carausius on a base silver coin, and in the possible question as to whether at the beginning of his reign the later base 'Antoniniani' may not have been still in circulation at a higher value than the contemporary copper '3rd brass', and whether previous to the issue of silver denarii Carausius may not have intentionally continued the former base currency until it was superseded in the Empire generally by the good silver coinage of Diocletian and Maximian.

The coin in question is overstruck on a base Antoninianus of Philip I of the type of Cohen, No. 50.

Rev. **FIDES EXERCITVS** 'Four military ensigns of which the third is surmounted by a Roman eagle'.

The Carausius obverse is overstruck on the reverse of the Philip coin leaving one of the standards and **VS** of **EXERCITVS** still visible. The reverse of Carausius is on the obverse of the Philip, which is only partly obliterated, leaving the back of the head and . . . **P M IVL PHIL** . . . distinct.

The portions of the Carausius striking visible are:

Obv. . . . **ARAVSIVS AVG**, radiate bust to right.

Rev. . . . **AVG**, standing figure to left with cornucopiae.

The missing portion of the legend is probably **PAX**, but it may be **LAETITIA**.

FREDK. A. WALTERS.

OVERSTRIKES of Carausius, evidence perhaps of the haste in which he carried out his usurpation, are found in sufficient numbers to justify the belief that they formed or supplemented his first issue, and were officially current, but still

they are scarce. Lord Selborne has no less than 24 among the 545 coins of Carausius in the Blackmoor Hoard, but I do not think that I saw more than a like number among the numerous other collections which I examined a few years since. It is reasonable, however, to assume that there are many pieces so well overstruck that, though we may suspect the fact, no identifiable traces of the original coin remain visible.

No rule of striking is discernible; obverse is sometimes on obverse and sometimes on reverse. Sometimes we can trace the older bust, or part of it, at others only portions of the reverse type or legends are visible, and some curious combinations arise. Some specimens are figured in *Num. Chron.*, 1907, plate V. On No. 8 the profiles of Claudius Gothicus and Carausius are both visible, on No. 9 the obverse inscription reads **IMP CARAVSIVSICVS CAES** (the coin being originally of Tetricus II), and on the reverse of No. 10 the letters **IMP C VICTORIN** are still legible.

The style of the overstrikes affords some ground for attributing them to the early moneyers of the London Mint, as they resemble some of the rougher issues which bear its mintmark, and this seems consistent with the view that places them among the first issues of the reign. It seems that the mint of Colchester was not established until more skilful moneyers were available.

The coins of many emperors, from Gallienus to Diocletian inclusive, were made use of, but hitherto no overstrike has been published which falls without those limits, or is made on a white metal coin.

Taking the great Blackmoor find as some guide to the condition of the currency in Britain during the period, which we may fairly do, as it was, no doubt, a deposit of government funds, and as its evidence seems to be supported by that of other recorded finds, it would appear that the coins in circulation were mostly those from about the time of Gallienus onward. The coin now published is therefore of particular interest on account of its metal and date.

As it is of a very poor alloy and weighs about 37 grains against an average weight of about 60 grains, which appears to have been aimed at in the reign of Philip, it may be that it had, even before it was restruck, fallen into use as one of the common small bronze currency. The denarii of Carausius, though they are sometimes of inferior silver, were evidently intended to be a true silver issue.

P. H. WEBB.

V.

QUAESTIONES CYRENAICAE.

(Continued from p. 104. SEE PLATES III-VI.)

The Gold Coinage.

We can now approach the gold issues of Cyrene. As has been mentioned above,⁸³ the first Cyrenaic gold coin was probably struck towards the close of the second period; it is a drachm of Samian weight, the same weight as was employed for contemporary silver drachms. Fairly soon in the next period we meet the following pieces, without magistrates' names, and mostly without ethnics.

54. *Obv.*—Head of bearded Ammon l., careful work, hair not very free, eye three-quarter face, pupil marked.

Rev.—Silphium with two whorls and five umbels;

K	Y
P	A
И	A

Gotha. *N.* 55. Wt. 53.2 grs. Samian drachm.

55. *Obv.*—Silphium plant with two whorls and five umbels.

Rev.—Head of bearded Ammon r., the hair and beard curling elaborately; dotted circle; circular incuse.

B. M. *N.* 0.45. Wt. 26.4 grs. Samian hemi-drachm. Another (coarser style), B. M. *N.* 0.35. Wt. 26.3 grs.

⁸³ p. 86, No. 31.

56. *Obv.*—Head of youthful Ammon r.; dotted circle.

Rev.—Ram's head r.; dotted circle.

B. M. *N.* 0.35. Wt. 13.4 grs. (The true weight is less, as the coin has been mounted and retains some solder.)

57. *Obv.*—Head of nymph r., the hair bound thrice round and coiled over the ear; dotted circle.

Rev.—Head of bearded Ammon r., rather coarse style.

B. M. *N.* 0.3. Wt. 13 grs.

58. *Obv.*—As last.

Rev.—Head of youthful Ammon r., hair loose, eye three-quarter face.

Paris. *N.* 0.3. Wt. 13.6 and 14.2.

59. *Obv.*—Similar(?); die damaged.

Rev.—Head of bearded Ammon facing, with uraeus.

B. M. *N.* 0.3. Wt. 13 grs.

It is possible that No. 56 may belong to Barce, for the only other known occurrence of the ram's head as a Cyrenaic coin type is on certain coins of that city of the close of the first period.⁸⁴ But this cannot be regarded as decisive, and the style of the coin affords no criterion. The style of the reverse of No. 55, as Dr. Head has pointed out,⁸⁵ is more suggestive of some of the Ammon heads of Barce than of any of those of Cyrene, but as it can be easily paralleled in both series a decision on such grounds is difficult. The same is true of No. 57. It might be urged that the female head on Nos. 57-9, which is habitually described as Cyrene, would decide the attribution to the city to which the nymph gave her name. But even if Cyrene were not

⁸⁴ *M., Suppl.*, 290 A. Cp. also the full figure on \mathcal{A} of Barce, No. 80 below.

⁸⁵ *Hist. Num.*², p. 873.

an ancient Greek goddess as Studniczka argues, at least her sphere was wider than that of a mere city-eponym. This well-marked type of head with the curious arrangement of the hair occurs, it is true, on later gold coins of the same denomination, bearing the signature **IA**, presumably the Cyrenaean magistrate **IAΞΩΝ**, but it is also found on the following which belong to the close of the second or beginning of the third period at Barce.

60. *Obv.*—Head of nymph as on Nos. 57-9; behind, **BAPK** ζ; dotted border.

Rev.—Head of bearded Ammon r., hair and beard in heavy curls, eye three-quarter face; dotted square, in corners of which ∇ β ; incuse square. \times \triangleright

B. M. A. 0.4. Wt. 12.6 grs. Samian trihemiobol?

This coin certainly connects the nymph type definitely with Barce. The appearance of the inscription on both sides is not unusual; but on the obverse there seem to be traces of a fifth letter which cannot but be **A**. May not the obverse inscription refer closely to the type⁸² and give us here the name of a nymph Barce made to match Cyrene?

Nos. 56-9 are the first of a long series of which the normal weight seems to be 13-13.5, though some of the earliest, *e.g.* No. 58, weigh a little more. It is obvious that this weight can be very easily related to the hemidrachms, Nos. 54 and 55, and to the drachm of the last period. It is exactly a quarter of the Samian drachm of 53-4 max., so that the coins are trihemiobols. Thus the early gold series consisted of

⁸² Cp. **KYPANA** above, No. 10.

drachm, hemidrachm, and trihemiobol of 53-4, 27, 13-13.5 grs. respectively. It is noteworthy that at the rate of 15:1, which seems to be certainly established for silver against gold in the last years of the fifth century in Sicily, a gold piece of 13.5 grs. would be worth $13.5 \times 15 = 202.5$ grs. of silver, or just about the weight of the contemporary tetradrachm. It is noteworthy, too, that the unit of the earliest gold coins at Gela is of the same weight, which is that of the Sicilian litra.

To find gold and silver equivalents in Greek numismatics must always be an uncertain task, but this coincidence between the values of the contemporary silver tetradrachm and gold trihemiobol seems too close to be overlooked. These little gold pieces form a bridge to connect the older gold issue with the new issue of staters of Attic weight which began in the opening years of the fourth century. While the earliest of them weigh a decimal or two more, Nos. 57 and 59 represent the most usual weight, say 13.3. This is exactly a tenth of the new stater, and as such it is grafted on to the new system, where it is a common piece right down to the end.

A feature of the numismatics of the early fourth century is the outburst in the Aegean basin of a gold coinage of Attic weight, to which Athens herself had given the impetus⁸⁷ by her issue of necessity in 408. Style would date the earliest gold of Rhodes⁸⁸

⁸⁷ P. Gardner, "Coinage of the Athenian Empire," in *J. H. S.*, 1914; Woodward, *Num. Chron.*, 1911. Though no staters of the earliest issue at Athens have come down to us, χρυσοί, standing as it does alone in the inscription, must refer to staters; and anyhow we have drachms.

⁸⁸ *B. M. C. Caria*, p. 231, No. 10.

to about the year 390, and the staters of the Chalcidian League are not much later. The new gold issue at Cyrene is another instance, and falls chronologically into line with the rest. We may win confirmation of this by examining the silver series. Most (though unfortunately not all) of the magistrates whose names occur on the gold are represented on the silver as well, and there are none of them whom for reasons of style we should put as early as Nikis or Aristomedes. Of this gold coinage the denominations are

Stater 133.5 grs.

Drachm 66.5 "

Triobol 34 "

Tenth 13.3 "

the first and last being the commonest.⁸³ The magistrates whose names we find on staters are **ΑΡΙΣΤΑΓΟΡΑ**, **ΧΑΙΡΕΦΩΝ**, **ΔΑΜΩΝΑΚΤΟΣ**, **ΚΥΔΙΟΞΘ**, **ΘΕΥΦΕΙΔΕΥΞ**, **ΙΑΞΟΝΟΣ**, **ΚΥΧΑΙΡΙΟΣ**, **ΧΑΙΡΙΟΣ**, **ΠΟΛΙΑΝΘΕΥΞ**, while a tenth of rather early style has the name **ΑΡΙΣΤΙΟΣ** (which also appears on the silver tetradrachms) and another reads **ΚΥΘ** - - -. There are, besides, two drachms struck from altered dies, on each of which traces of the old name show through, and in one case this name does not seem to be already familiar.

It is, I think, possible by a comparison of dies and by other arguments to establish within certain limits the

⁸³ There is a coin in the Catalogue of a Late Collector (Sotheby, Wilkinson and Hodge, 1900), lot 483 (not illustrated), with the types of the drachm and inscription **ΧΑΙΡΙΟΣ**, of which the weight is given as 44 grains. If both inscription and weight are rightly given, this would be an anticipation of the tetrobol of the next period (M. i. 205).

succession of these magistrates. It is the usual thing in this series to find several gold coins from the same die, and in two cases one and the same obverse die is employed by three different magistrates. Now, if we may assume that the magistrates succeeded each other without overlapping, we have here the materials for accurate arrangement, at least as far as these two groups are concerned. It is necessary first to give grounds for such an assumption. At first sight two examples of such a phenomenon as three magistrates using the same obverse die would rather suggest that the magistrates were contemporary, especially when we find that the one who falls in the middle uses other obverse dies as well. But a close examination of every one of the coins concerned to which I could get access has convinced me that under each magistrate the die has progressively deteriorated. Thus, though flaws vary in size under magistrate C, they are never smaller under C than under B, and so on.⁶⁰ In the case of two magistrates of one of these groups we get confirmation of a similar nature from a common die in the drachm series. We may take it, then, that it is as probable as things of this nature can be in Greek numismatics, that the magistrates were successive, and not contemporary.

The types of the gold staters are well known. On the obverse they bear a quadriga, sometimes

⁶⁰ I am much indebted to my colleague, Mr. G. C. Brooke, for very patient help in this matter. I submitted to him a series of coins from these two dies without telling him in what order I thought they should be placed, and in the case of casts without giving him the reverses. Though based simply on the condition of the obverse die at the time of striking, his arrangement brought all coins of the same magistrate together and the magistrates themselves into the same succession as had seemed right to me.

driven by Victory; the reverse is occupied by Zeus. The reverse types fall into two classes, according as they represent a seated or a standing figure. The standing figure always has the ram's horn; the seated figure, except in one instance, never. While the former (often accompanied by his ram) is Ammon, the latter (who generally appears with the eagle) is probably, as Müller⁹¹ has pointed out, the Arcadian Zeus Lycaeus, for whose presence at Cyrene the hill of Zeus Lycaeus (Herod., iv. 203) is evidence and the advent of Demonax (*ibid.*, 161) would account. The parallel between this type and that of the early coins of the Arcadian League is striking.

We may now make some attempt at a chronological arrangement. Their use of the same obverse die brings **ΚΥΔΙΟΣΘ—ΘΕΥΦΕΙΔΕΥΣ—ΙΑΞΟΝΟΣ** and **ΚΥΧΑΙΡΙΟΣ—ΧΑΙΡΙΟΣ—ΠΟΛΙΑΝΘΕΥΣ** together in the order mentioned. At the same time the **ΚΥΧΑΙΡΙΟΣ** group is stylistically later than the **ΚΥΔΙΟΣΘ - - -** group, as is shown by a glance at the later issues of **ΠΟΛΙΑΝΘΕΥΣ**, the last of which links up closely with the unique stater of the Ptolemaic period at Paris (see below, Nos. 71 and 98). Where should **ΑΡΙΣΤΑΓΟΡΑ**, **ΧΑΙΡΕΦΩΝ**, and **ΔΑΜΩΝΑΚΤΟΣ** be placed? All these three use as reverse type Zeus Ammon standing, with short hair; the style, which in the case of the first two is crude, is very similar, and in itself would indicate an earlier date than that of the **ΚΥΧΑΙΡΙΟΣ** or **ΠΟΛΙΑΝΘΕΥΣ** groups. Further, these latter groups hang together not only stylistically but also in virtue of both obverse and reverse types.

⁹¹ *op. cit.*, p. 67.

On the obverse in each case, above the chariot, which is proceeding at a walk, is a solar disk, a feature unknown on any of the other obverse dies; in fact the **ΚΥΧΑΙΡΙΟΣ** die gives the impression of being directly suggested by the **ΚΥΔΙΟΣΘ** --- die. Again, under every magistrate in the first group, and under the first two in the second group (save possibly in one instance, where it may be a seated Ammon; see M. i. 189, and the discussion of this coin below), the reverse is occupied by the seated Zeus Lycaeus. Under the last of the second group, **ΠΟΛΙΑΝΘΕΥΞ**, we find throughout the standing Zeus Ammon. Style and the development of types thus point irresistibly to a direct succession from the **ΚΥΔΙΟΣΘ** --- group to the **ΚΥΧΑΙΡΙΟΣ** group. As has been hinted above, and as will be demonstrated later, **ΠΟΛΙΑΝΘΕΥΞ**, the last of the latter group, must come down to the beginning of the Ptolemaic era. The **ΑΡΙΣΤΑΓΟΡΑ—ΧΑΙΡΕΦΩΝ—ΔΑΜΩΝΑΚΤΟΣ** group will therefore come at the beginning of the series.

This conclusion is confirmed by two other considerations. The first, though it offers only negative evidence, is worth taking into account. Under **ΑΡΙΣΤΑΓΟΡΑ**, **ΧΑΙΡΕΦΩΝ**, and **ΔΑΜΩΝΑΚΤΟΣ** the only known subdivision is the tenth. Under **ΚΥΔΙΟΣΘ** --- and **ΘΕΥΦΕΙΔΕΥΞ** we find the drachm as well; **ΙΑΞΩΝ** adds the triobol; and the whole set is maintained under **ΧΑΙΡΙΟΣ**⁹² (except the tenths), and under **ΠΟΛΙΑΝΘΕΥΞ**. Thus if the order suggested for these magistrates be correct

⁹² **ΚΥΧΑΙΡΙΟΣ** stands in an exceptional position; his staters are very rare (I have only seen four including the Brit. Mus. specimen) and there are no subdivisions bearing his name, not even tenths. It may be suggested that his tenure of office was soon cut short.

the system becomes more complex as time goes on, till a maximum number of subdivisions is reached which is maintained till the end of the series. The second point has reference to the relative die positions. Dr. Macdonald (*Hunter. Cat.*, iii, p. 588, note) has already remarked that the die positions on the gold staters are irregular except for **ΧΑΙΡΙΟΣ** and **ΠΟΛΙΑΝΘΕΥΣ**. My own experience confirms this except that I would add **ΚΥΧΑΙΡΙΟΣ**. We may presume that the rest of the coins, on which the die position is constantly varying, precede those of these three magistrates, among whose coins I have met with only one example of irregularity.

Having roughly settled the order of the magistrates we may notice some pieces which for one reason or another demand discussion.

61. *Obv.*—Head of youthful Ammon r.; behind, **ΑΠΙ**; in front, **ΞΤΙΟΣ** retrograde ∩; linear border.

Rev.—Head of Cyrene as on No. 57, but l.

B. M. *N.* 0.3. Wt. 12.6 grs.

62. *Obv.*—Head of bearded Ammon r., diademed, wearing uraeus; linear border.

Rev.—Head of Cyrene r., hair rolled, with tresses hanging down on either side of neck; in front, **ΚΥΘ**.

B. M. *N.* 0.3. Wt. 13.3 grs.

63. *Obv.*—Similar; no diadem or uraeus; behind, **ΑΠΙ**, outwards.

Rev.—Facing head of Cyrene, slightly turned to r., wearing ear-rings.

B. M. *N.* 0.3. Wt. 13.3 grs.

64. *Obv.*—Similar, head l.; behind, **ΧΑΙ**, outwards.

Rev.—Similar.

B. M. *N.* 0.3. Wt. 13.1 grs.

Its fine style and the shape of the letters would lead us to place No. 61 early in the century; that we have no staters of **ΑΡΙΣΤΙΟΞ** may be an accident, and at all events there is a silver tetradrachm.⁹³ The fact, unusual on these small coins, that the name is written at length might lead us to put the coin after those of **ΑΡΙΣΤΑΓΟΡΑ**, who signs on the tenths as **ΑΡΙ** (cp. No. 63), the assumption being that it was necessary to write the name in full to avoid confusion; but the earlier style as well of reverse as of obverse will hardly allow this.

There is no doubt as to the reading of No. 62.⁹⁴ Unfortunately it has sometimes influenced the reading of other tenths, really of **ΚΥΔΙΟΞΘ** - - with the inscription **ΚΥΔ**. The types of **ΚΥΔ** are different,—on the obverse the beardless horned head, on the reverse the nymph with her hair rolled, but no hanging tresses. To judge by the presence of the latter on his coin, **ΚΥΘ** - - cannot come very early in the series. Nos. 63 and 64 are obviously very close in style; as we have seen, the facing head is characteristic of the beginning of the fourth century at Cyrene. **ΑΡΙ** - - and **ΧΑΙ** - -, it is true, are capable of very various terminations, and among magistrates already known on Cyrenaean coins we have **ΑΡΙΣΤΟΜΗΔΕΟΞ**, **ΑΡΙΣΤΙΟΞ**, **ΑΡΙΣΤΑΓΟΡΑ**, **ΧΑΙΡΕΦΩΝ** and **ΧΑΙΡΙΟΞ** from which to choose. But the facing-head type and the style in general are rather early for **ΧΑΙΡΙΟΞ**, while as for **ΑΡΙ** - - (1) no other gold of **ΑΡΙΣΤΟΜΗΔΕΟΞ** is known, and (2) if it were **ΑΡΙΣΤΙΟΞ** we might expect the name in full as on the other tenth, No. 61.

⁹³ Macdonald, iii, Cyrene, 23-4.

⁹⁴ M. i. 219.

We have already seen that their gold staters bring **ΑΡΙΣΤΑΓΟΡΑ** and **ΧΑΙΡΕΦΩΝ** very close together, and we may therefore conclude with some probability that Nos. 63 and 64 bear the same names in more abbreviated form.

65. *Obv.*—Quadriga r. at the gallop, driven by male figure in long chiton; in exergue, **ΚΥΡΑΝΑΙΟΝ**; dotted border.

Rev.—Ammon standing to front, his head r.; l. hand resting on sceptre, r. on hip; in field l. owl.

Paris. *A.* 0.65. Wt. 132.8 grs.

66. *Obv.*—Similar (same die).

Rev.—Similar (same die), but in addition in, field r., silphium; around, **ΧΑΙΡΕΦΩΝΩ**.

B. M. *A.* 0.7. Wt. 133.5 grs.

67. *Obv.*—Horseman r.; behind, **ΚΥΡΑ**, above which, traces of previous inscription.

Rev.—Silphium with two whorls and five umbels:

Κ	Υ
Ρ	Α
Ν	Α

Paris. *A.* 0.5. Wt. 66 grs.

68 a and b. *Obv.*—Horseman l. (of large fine style); behind, corn-grain.

Rev.—Silphium with two whorls and five umbels;

Ι	Α
Ξ	ΙΟ
Η	Ο

68 a. Berlin. *A.* 0.6. Wt. 66.5 grs.

68 b. B. M. *A.* 0.6. Wt. 64.8 grs.

All these coins have a similar interest, for in every case the die has been altered. That the reverses of Nos. 65 and 66 are from the same die, is shown by various indications, notably the accidental nick in

the middle of the sceptre; yet between the striking of the two coins a magistrate's name and a symbol have been added.

Of No. 67 one cannot make out the underwritten inscription, though its traces are provokingly plain: it begins with an A, Λ, or N, and finishes after three or four letters, as Müller⁹⁵ has noted, with a P. Further than this we cannot go.

No. 68a, formerly in the collection of Dr. Imhoof-Blumer, and published first by Bompois⁹⁶ and later by Müller,⁹⁷ is a great puzzle. The Ι, Α, Ξ are thick and indistinct. Bompois regarded it as reading either ΙΑΞΙΟΝΟΞ from a nominative ΙΑΞΙΩΝ, or simply as ΙΑΞΟΝΟΞ into which an Ι had crept by the mistake of the engraver. Müller, on the other hand, seeing an upright stroke above the left lower whorl of the silphium mistook for an iota what is in reality a flaw, and read the whole as ΙΑΞΙΟΝΙΟΞ from ΙΑΞΙΟΝΙΞ on the analogy of other Cyrenaic names. Dr. Regling, who very kindly made a close examination of the coin for me, writes as follows: "The coin has been double-struck with such force as to alter all the

shapes. Originally the inscription was probably

	Α	Ι
	Ο	Ξ.
	Ο	Ν

One can see that the present Α arises out of Ι, and the Ξ, Ν and Ο out of other letters; during this alteration the little accidental Ι beside the middle Ο may have been added, or it may have been left as the remnant of the Ξ that previously stood there; the small letters ο belong to a later engraving of the die."

⁹⁵ i, p. 69.

⁹⁶ Bompois, *op. cit.*, pp. 119, 120.

⁹⁷ M., Suppl., No. 52 A.

None of these explanations seems to me adequate, especially in view of the London specimen (68b), which

though in poor condition plainly reads $\begin{array}{cc} & \text{I} & \text{A} \\ & \text{Ξ} & \text{O} \\ \text{N} & & \text{O} \end{array}$, while

the rest of the letters are practically obliterated, only faint traces of them being visible with the glass. That the same peculiarities are reproduced on both specimens puts the theory of double striking out of court, though the reading on the Museum example seems to show that what was really intended was IAΞONO . We have already remarked on the thickness of the letters I , A , Ξ ; I would suggest that the original inscription was

$\begin{array}{cc} \text{K} & \text{Y} \\ \Delta & \text{IO} \\ & \text{Ξ} \end{array}$, and that the die was then altered, the

intention being that it should read $\begin{array}{cc} & \text{I} & \text{A} \\ & \text{Ξ} & \text{O} \\ \text{N} & & \text{O} \end{array}$. There are

clear traces of what would have been the lower bar of the K ; the left bar of the A is much thicker than the right; and the Ξ is misshapen. The N and O below would be newly cut, while the O on the r. were let alone, whence their greater sharpness and relative smallness. Unfortunately the I on the right survived as well, presumably through an oversight, and from the die in this condition the Berlin specimen was struck. Later still, the die was again taken in hand and the offending I as well as the Ξ immediately below it erased. From the die as now altered the London specimen was struck. That the almost complete disappearance of the I and Ξ on the latest coin is due to a second alteration of the die, and not to faulty striking, is indicated by the fact that the flaw above the left

leaf of the lower whorl (which Müller took for an l) appears as before. There is no chronological difficulty, for **KYΔIOΞ** - - is the first of the group of which **ΙΑΞΟΝΟΞ** is the last. In style the horseman on this coin suits well with the horseman on those of the previous magistrate **ΘΕ[ΥΦΕΙΔΕΥ]**, M. i. 198. Both are of a larger style than is usual, and both are turned to the left—a position otherwise unknown in the drachm series. Apparently from the same obverse die as the **ΙΑΞΟΝΟ**⁹⁸ drachm there is another coin, the reverse of which reads simply **KYPA**. In this case there is no corn-grain on the obverse, which shows that the obverse die too has been touched up before being used for No. 68. The coin (M. i. 197), with our Nos. 65, 67, and M. i. 196, forms a group characterized by the absence of any personal name. The obverse die of No. 67 is found in three combinations in an order which its condition allows us to establish as follows, (1) with a reverse of **KYΔIOΞ**, (2) with the present reverse **KYPA**, and (3) with a reverse of **ΘΕ[ΥΦΕΙΔΕΥΞ]**. No. 67 was therefore struck after the regular introduction of magistrates' names on the gold series. The same must be true of M. i. 197, and almost certainly of M. i. 195, the arrangement of the legend on which strongly suggests the drachm of **KYΔIOΞ**, M. i. 198. Is the omission of a magistrate's name due to accident or to design? Possibly sudden death may now and again have caused an interregnum during which urgent necessity for money may have arisen; but the general run of the series seems rather to indicate carelessness as a cause.

⁹⁸ In Paris. M., No. 197. Another splendid example in the Fenerly Bey Coll. (Egger), Pl. xxii. 853.

Of the lax arrangements of the mint (which, it is true, are most in evidence during the time **ΑΡΙΣΤΑΓΟΡΑ—ΙΑΞΟΝΟΣ**) we have proof in the alteration of the dies spoken of above, and especially in our No. 67, where the ethnic appears on both sides. On all the signed gold drachms down to **ΙΑΞΟΝΟ-** the name is on the reverse, and the ethnic (when present) on the obverse, whereas on the issues of **ΧΑΙΡΙΟΣ** and **ΠΟΛΙΑΝΘΕΥΣ** the positions are reversed. Of the unsigned drachms, none of which as we have seen fall later than **ΙΑΞΟΝΟΣ**, two out of three (our No. 67, and M. i. 197) have the ethnic on the reverse, in the case of the first in addition to the ethnic on the obverse. But at this period, especially under **ΚΥΔΙΟΣ--**, dies of the same size and style, with ethnic on the reverse, were in use for the silver drachms, and it is possible that at need these were employed for the gold also.

It may be objected that among the gold triobols at least we find several without a magistrate's name. If this were true, it would lead us to reconsider our opinion about the unsigned drachms, but if we examine the alleged examples as given by Müller (M. i. 209 and 210) we shall find that as a matter of fact these two coins belong to **ΙΑΞΟΝΟΣ** and **ΠΟΛΙΑΝΘΕΥΣ** respectively. The coins are struck on a smallish flan, and the inscription is weakly cut on the outer edge of the die. For example, under i. 209 Müller cites a Payne Knight coin (*Num. Vet.*, p. 214, D 1), which though it shows no trace of a magistrate on the obverse, is from the same die as another piece in the British Museum, on which the inscription **ΙΑΞ** is plain. Coins from this obverse die are not uncommon, but my

experience is that in more than fifty per cent. of cases the $\text{IA}\Sigma$ does not appear. The same is true of M. i, 210.

Before leaving these triobols a small point may be noticed which, such as it is, supports the general chronology of magistrates here advanced. We have noticed that the ethnic does not appear on the reverse in the drachm series till the time of ΧΑΙΡΙΟΣ and ΠΟΛΙΑΝΘΕΥΣ . Now on the triobols of ΙΑΞΟΝΟΣ , both ethnic and signature appear on the obverse, while under ΧΑΙΡΙΟΣ and ΠΟΛΙΑΝΘΕΥΣ , though the signature remains on the obverse, the ethnic has gone round to the reverse exactly as on the drachms.

Mention has been made above of the magistrates ΚΥΔΙΟΣΘ[ΕΝΟΥΣ] and ΚΥΧΑΙΡΙΟΣ . As they appear here for the first time, it may be well to publish the two staters on which these readings are based.

69. *Obv.*—Quadriga, driven by charioteer in long sleeveless chiton r.; above, ΚΥΡ[ΑΝΑΙΟΝ] ~ divided by star of nine rays; linear border.

Rev.—Zeus Lycaeus seated l. on throne, his l. resting on the back, his outstretched r. holding eagle; behind, ΚΥΔΙΟΣΘ ~; linear border.

B. M. A. 0.8. Wt. 132.6 grs.

70. *Obv.*—Similar, but the star has a central disk, and only half of it is shown; to l. ΚΥΡΑΝΑΙΟΝ ~.

Rev.—Similar; in field l., thymiaterion; behind, ΚΥΧΑΙΡΙΟΣ retrograde ~.

B. M. A. 0.8. Wt. 133 grs.

No. 69 is very puzzling. The reverse inscription is absolutely certain. The way it is written shows that the Θ must be an integral part of the name; besides, on these staters we never find anything in

the way of an additional letter, or even symbol, for the owl and silphium on Nos. 65 and 66, and the jerboa and locust which appear on some of the drachms are in the nature of adjuncts. The only possible completion is as **KYΔIOΞΘΕΝΟΥΞ**, genitive of **KYΔIOΞΘΕΝΗΣ**. But this would be a most irregular form; the name *Κυδοσθένης* (already known)⁹⁹ or a form on the analogy of *Καλλισθένης* might have been expected. The inscription **KYΔIOΞ**, occurring on the gold drachms and silver tetradrachms¹⁰⁰ and drachms, has hitherto been taken as a Doric genitive of the nominative **KYΔΙΞ** on the analogy of **ΧΑΙΠΙΟΞ**, **ΝΙΚΙΟΞ**, &c. But it cannot be regarded as a different name from the one appearing on our gold stater, for **ΘΕΥΦΕΙΔΕΥΞ**, the successor of **KYΔIOΞ**, uses the same obverse dies for his staters and drachms as are employed for No. 69, and for the drachms bearing **KYΔIOΞ**. Of No. 70 I know three other examples, one in Gotha, one in Paris, and one from a London sale (Stanford).¹⁰¹ The third letter has been taken, in the case of the Gotha and Paris specimens, for a **Φ** or **Υ**, but on the latter, and on the Stanford coin, it is quite clearly a **X** set crosswise, as on most of the **ΧΑΙΠΙΟΞ** pieces.

An examination of these gold staters reveals much diversity in fabric as well as in style. The flan is either small and dumpy, or spread; and the style varies with the fabric. These differences in style and fabric are not chronological; they co-exist side by side

⁹⁹ Pape-Benseler, *Gr. Eigenn.*, s.v.

¹⁰⁰ M. i. 135; on this coin the shortness of the inscription is not due to lack of room.

¹⁰¹ Sotheby, Wilkinson and Hodge, 1907 (Stanford Coll.), Pl. ii. 97.

under more than one magistrate. Compare, for example, under **ΘΕΥΦΕΙΔΕΥΞ**, M. i. 184 with M. i. 185; under **ΙΑΞΩΝ**, M. i. 189 with the stater in the Warren (Greenwell) Collection, Pl. xxxi. 1349; and under **ΠΟΛΙΑΝΘΕΥΞ**, M. i. 192 with Warren (Greenwell), Pl. xxxi. 1347. There is no corresponding distinction of fabric in the case of the other magistrates; but these employ only one obverse die each for all their staters which I have examined. On all coins of the broad style and spread fabric, from **ΑΡΙΣΤΑΓΟΡΑΣ** to **ΠΟΛΙΑΝΘΕΥΞ**, the horses are walking; on all of the other style and fabric, from **ΧΑΙΡΕΦΩΝ** downwards (except possibly under **ΔΑΜΩΝΑΚΤΟΣ**, and at the very end under **ΠΟΛΙΑΝΘΕΥΞ**), they are galloping. Again, the magistrate's name is in the nominative on **ΧΑΙΡΕΦΩΝ**'s staters and on the dumpy stater of **ΙΑΞΩΝ** (M. i. 189), but these are the only two instances of this usage in the whole series. Finally, on the last-mentioned stater the Zeus though seated is Ammon, as on the rest of the same fabric, not Lycaeus as on the coins of spread fabric.

It seems to be more than chance which connects the groups of the thick and of the spread fabric, each with itself, and contrasts them with each other. Little as we know about the organization of the Greek mints, it looks as if we had here to do with two separate *officinae*, which worked at irregular intervals, and independently of each other. Such a theory would explain, for example, the issues of **ΘΕΥΦΕΙΔΕΥΞ**. Under this magistrate we have coins of both fabrics. Of the spread fabric one obverse die is used in connexion with three reverse dies, the same die being used by his predecessor **ΚΥΔΙΟΞΘ** - -, and

his successor **ΙΑΞΟΝΟΣ**, which shows that it was not worn out in his time. Side by side with these, however, we have one reverse and two obverse dies of the thick fabric which are not coupled with any dies of the spread fabric. Clearly the two sets must have been in use simultaneously.

Three other gold coins which do not appear in Müller may be here mentioned.

71. *Obv.*—Quadriga r. driven by Nike wearing wreath; above, **KYPANAION**; linear border.

Rev.—Zeus Ammon standing l., his l. resting on lotus-tipped sceptre; in his outstretched r. he holds patera over thymiaterion; in field r. upwards, **ΠΟΛΙΑΝΘΕΥΞ**.

B. M. *N.* 0.8. Wt. 132.6 grs.

72. *Obv.*—Quadriga r. as on No. 69; above, star; no inscription.

Rev.—Zeus Lycaeus seated l.; in front eagle mounting with serpent in beak; behind **ICONI** (*sic*).

E. T. Newell. *N.* 0.75. Wt. 132.8 grs.

73. *Obv.*—Quadriga with rayed disk as on No. 70; the inscription, which is also arranged exactly as on No. 70, reads **KYPNAI ON** (*sic*) ζ.

Rev.—Zeus Lycaeus seated l., r. resting on sceptre; behind, eagle; in field l. upwards, **KYPA NAION** retrograde.

N. 0.75. Wt. 128 grs.

No. 71 is the latest coin of **ΠΟΛΙΑΝΘΕΥΞ**; the minuteness of the style and the tiny letters with their marked pointing attach it to the gold stater of the Ptolemaic era in Paris.¹⁰²

Nos. 72 and 73 are interesting as showing the popularity which the Cyrenaean gold staters must have

¹⁰² Babelon in *Rev. Num.*, 1885, p. 399, Pl. xv. 7, No. 98, below.

enjoyed on the limits of the Greek world. No. 72 was acquired in Egypt, as was also probably No. 73.¹⁰³ They are both of obviously barbarous work, and directly copied from coins which we possess. For example, No. 72 is modelled down to the smallest details on the coin of **ΙΑΞΟΝΟΞ**, an example of which is to be found in the Warren (Greenwell) Collection (Pl. xxxi. 1349). Now this issue of **ΙΑΞΟΝΟΞ** is the last of those which share the common **ΚΥΔΙΟΞΘ-ΘΕΥΦΕΙΔΕΥΞ-ΙΑΞΟΝΟΞ** obverse die, and owing to the worn condition of the die the ethnic is very faint on all specimens that I have seen. On the copy (No. 72) it does not appear at all, while the reverse inscription is a blundered attempt at **ΙΑΞΟΝΟΞ**. No. 73 is more vigorous, and at the same time more barbarous. The obverse is copied from the common **ΚΥΧΑΙΡΙΟΞ-ΧΑΙΡΙΟΞ-ΠΟΛΙΑΝΘΕΥΞ** die, again down to the smallest details; cp. the solar disk and the arrangement of the legend. The reverse is copied from the reverse dies of **ΘΕΥΦΕΙΔΕΥΞ** and **ΙΑΞΟΝΟΞ**, with the eagle behind the throne of Zeus (e.g. Warren (Greenwell), Pl. xxxi. 1348, 1350), though the ethnic in crudely-formed letters takes the place of a magistrate's name. The inscription on the obverse has given rise to some confusion. In Huber's sale catalogue it is printed as **KOINON**, to which it bears some superficial resemblance, but a closer examination shows it to be

¹⁰³ It came originally from the collection of C. G. Huber, Austrian Consul in Egypt: from his sale (lot 1276) it passed into the Addington, Ashburnham and O'Hagan Collections. The light weight of the coin enables me to identify it in these changes of ownership; it is important to maintain the identification in view of the deductions that have been drawn from the misreading of the obverse.

what we should *a priori* expect, a blundered attempt at the ethnic. Müller (*Additions*, vol. iii, p. 188), accepting the reading from Huber's catalogue, very naturally brings the coin into connexion with the other KOINON issues, when of course it would be of great importance. As it is, it gives with No. 72 an instance of a local imitation of the Cyrenaean issues. Who was responsible for these imitations cannot be determined, but the fact that one of them most probably, the other certainly, came from Egypt would indicate North Africa, and some Libyan tribe, as their home.

Before leaving the gold series we may shortly examine two other theories as to the date of the Cyrenaean gold issues. The first is due to Sir Arthur Evans. On p. 62 of his work on *Syracusan Medallions and their Engravers*,¹⁰⁴ he argues that the winged charioteer, occurring occasionally on Sicilian tetradrachms at the close of the fifth century, is the result of Cyrenaean influence. This type "stands . . . in a very close relation to a well-marked group of quadriga types that appear on some contemporary coins of Kyrênê . . . The facing tendency of both horses and chariot, and the winged charioteers . . . are all found on a fine series of Kyrênæan gold *staters* which, from the early character of their style and epigraphy, must have been struck about the same period as our Sicilian pieces, and which in fact mark the flourishing epoch . . . that ensued on the fall of the Battiadae . . . But, whereas on the Sicilian dies the recurrence of such schemes is altogether isolated, in Kyrênê they are obviously at home, and we may even trace the genesis

¹⁰⁴ Published in *Num. Chron.*, 1891. The references here given are to the republication.

of one of the most important features of the design, the wings, namely, of the charioteer, which seem to have been suggested by the . . . mantle of the driver on a slightly earlier *stater*" [the ΔΑΜΩΝΑΚΤΟΣ coin, M. i. 194]. Such a view, which would place the beginning of these Cyrenaean staters as early as 430-420, leaves out of account the general relations of the Greek coinages with each other. As we have seen above, it is not till the next century that we find an outburst of gold coinage of Attic weight, the result of the first Athenian issues in 408. Also, as we have suggested, the expulsion of the Battiads does not seem to have caused a sudden outbreak of prosperity at Cyrene. But (what is more important) if the conclusions reached above are sound, it is not till the last magistrate ΠΟΛΙΑΝΘΕΥΞ, *i.e.* till after at least 340-330, that we find in the chariot a winged figure of the type required by Sir Arthur Evans.¹⁰⁵ Such an interval, too—about half a century—seems to preclude the possibility of the ΠΟΛΙΑΝΘΕΥΞ type being a development of the ΔΑΜΩΝΑΚΤΟΣ type.

The second theory was advanced by Six in the *Numismatic Chronicle* for 1897 (p. 220). Starting from the assumption that the silver didrachms of Attic weight were struck under Magas, an assumption which he bases on an ingenious explanation of the types of Eros and Hermes, he is necessarily led to the conclusion that, as the gold staters share two magistrates with the silver didrachms, they must be contemporary. This conclusion he attempts to reinforce by a com-

¹⁰⁵ A winged figure does occur on one die under ΙΑΣΩΝΟΣ (Warren (Greenwell), Pl. xxxi. 1350), but here both chariot and figure are facing; even so the coin cannot be much earlier than the middle of the fourth century.

parison between the seated Zeus Lycaeus and the seated Zeus, or Alexander type, on tetradrachms of Seleucus I and Antiochus I, suggesting further that the seated Zeus type was adopted to replace the standing type of ΠΟΛΙΑΝΘΕΥΞ and ΚΛΕΑ out of compliment to the Syrian king, whose daughter Magas wedded. With his dating of the silver Attic didrachms we shall deal later, but in regard to the gold staters it may be noted that Six's theory brings the coins signed ΠΟΛΙΑΝΘΕΥΞ, and even those with ΚΛΕΑ in monogram,¹⁰⁶ before the coins of ΘΕΥΦΕΙΔΕΥΞ and ΙΑΣΟΝΟΞ, which seems stylistically out of the question, while, though there is a certain superficial resemblance between the staters of ΧΑΙΡΙΟΣ and the Alexander type with the right leg drawn back, the closest parallels to the attitude of the Zeus on the coins of ΘΕΥΦΕΙΔΕΥΞ and ΙΑΣΟΝΟΞ are to be found rather in that of Baal-tars at Tarsus, or of Zeus Lycaeus on the even earlier coins of the Arcadian League.¹⁰⁷

The Silver Coinage.

The silver coinage of the second part of this period is subordinate to the gold issues. Granted the patchwork nature of our evidence, which depends upon one or two big finds, it is yet remarkable that, while all the magistrates whose names occur on silver, except the last, occur also on the gold, the converse does not hold good, and that, while down to 390 tetradrachms are comparatively common, after the introduction of the gold currency they become very scarce, till under

¹⁰⁶ This is the stater of Ptolemaic times, and *Phoenician* (not Attic) weight, published by Babelon in *Rev. Num.*, 1885, Pl. xv. 7.

¹⁰⁷ See above, p. 143.

ΚΥΧΑΙΡΙΟΣ and **ΧΑΙΡΙΟΣ** all silver coinage seems to disappear. Under **ΠΟΛΙΑΝΘΕΥΣ** who follows, we find a new silver coinage consisting of Attic didrachms,—new denominations of a new standard,—and these continue till the end of the century. Silver coins occur with **ΑΡΙΣΤΙΟΣ**¹⁰⁸ (tetradrachm), **ΑΡΙΣΤΑΓΟΡΑ**¹⁰⁹ (drachm), **ΚΥΔΙΟΣ**¹¹⁰ (tetradrachm and drachm), **ΘΕΥΦΕΙΔΕΥΣ**¹¹¹ (tetradrachm and drachm), **ΙΑΞΟΝΟΣ**¹¹² (tetradrachm and drachm), and **ΠΟΛΙΑΝΘΕΥΣ**, **ΦΕΙΔΩΝΟΣ**, and **ΘΕΥΦΕΙΔΕΥΣ**¹¹³ (Attic didrachms).

These coins do not offer us much of interest; I have not been able to find any die-couplings to throw light upon the chronological sequence, but the arguments from types and from weight standard go to confirm the order already suggested by the gold issues. The types are, as before, the horned head and the silphium, but under **ΘΕΥΦΕΙΔΕΥΣ** and **ΙΑΞΟΝΟΣ** we find for the first time on the tetradrachms the beardless head which we have already noticed on drachms. Now **ΚΥΔΙΟΣ** and **ΑΡΙΣΤΙΟΣ**, both of whom we have placed earlier than **ΘΕΥΦΕΙΔΕΥΣ**, have the bearded head only; **ΘΕΥΦΕΙΔΕΥΣ**¹¹¹ has both the bearded and the beardless head; **ΙΑΞΟΝΟΣ**, and all after him down to Ptolemaic times, have the beardless head only. In the same way (apparently after a break in the silver issue) the Attic weight is introduced under **ΠΟΛΙΑΝΘΕΥΣ** who, the gold series has indicated,

¹⁰⁸ Macdonald, iii. Cyr. 23-4.

¹⁰⁹ In Brit. Mus.

¹¹⁰ M. i. 135 (Copenhagen), and Brit. Mus.

¹¹¹ Warren (Greenwell), Nos. 1359-61; for the Attic didrachm reading **ΘΕΥΦΕΙΔΕΥΣ**, see below, No. 79.

¹¹² Brit. Mus. (*Num. Chron.*, 1892, p. 19) and Paris.

¹¹³ See the discussion of these coins below, 75-9.

should be placed at the end of the series. I would suggest that those drachms of this period which seem anepigraphic owe their apparent lack of a magistrate's name merely to condition or to careless striking: for example, if we examine the two coins M. i. 146 and M. i. 147, we find that on the latter all the field behind the neck, where we should expect the name, is off the flan. Most of the "anepigraphic" pieces resemble very closely the signed drachm of **ΚΥΔΙΟΞ** - - .¹¹⁴

Silver Coinage of Attic Weight.

As we have noted, there seem to be no silver coins (or none extant) of **ΚΥΧΑΙΡΙΟΞ** or **ΧΑΙΡΙΟΞ**. Under **ΠΟΛΙΑΝΘΕΥΞ** the new silver coinage of Attic weight begins. It consists of the following pieces:

74. *Obv.*—Head of beardless Ammon l., hair frizzed in tight curls behind; upwards and outwards, **ΠΟΛΙΑΝ**; dotted border.

Rev.—Silphium plant with three whorls and seven umbels; **Κ** **Υ**; dotted border.
Ρ **Α**

B. M. *AR.* 0.85. Wt. 129.3 grs. Attic didrachm.
(Berlin: same obv. but different rev. die.
Petrograd: same obv. die as No. 75 (?); wt.
131.5 grs.).¹¹⁵

74 A. *Obv.*—Head of beardless Ammon r., the style recalling that on coins of the Ptolemaic period; in front, **ΠΟΛΙΑΝ** outwards; dotted border.

Rev.—Similar (of florid style); [no ethnic?].

Hunter (Macdonald III. Cyrene, No. 25). *AR.* 0.8.
Wt. 133.6 grs.

74 B. *Obv.*—Similar (head l.); behind, **ΠΟΛΙ** outwards.

Rev.—Similar; **Κ** **Υ**
Ρ **Α**

Gwinner. *AR.* 0.4. Wt. 15.2 grs. Attic trihemiobol.
Another in Paris.

¹¹⁴ M. i. 145.

¹¹⁵ M. i. 142.

75. *Obv.*—Similar (head l.); in front, ΠΟΛΙΑΝΘΕΥΞΙ outwards; dotted border.

Rev.—Hermes standing naked three-quarters r., with petasus behind his neck, chlamys falling from his shoulders, and winged sandals; his l. hand rests on his hip, and in his r. he holds a filleted caduceus; in field l., upwards and outwards, ΔΑΜΩΚΥΡΑΙ - - ; dotted border.

AR. 0.85. Sir Hermann Weber; wt. 130 grs. Gotha; wt. 131 grs. Bompis; wt. 132 grs. (with silphium? behind the head), *op. cit.*, pp. 121-2.

76. *Obv.*—Young male head r., wearing wreath of ivy(?), and long hair which hangs on either side of neck; behind, quiver; in front, retrograde, ΞΟΝΩΔΙΞΦ) outwards; heavy dotted border.

Rev.—Eros winged, advancing r., playing on the lyre; across field ΔΑΜΩ[ΚΥΡΑ - - -(?)].

AR. 0.8. Paris. Wt. 130 grs.

77. *Obv.*—Similar (same die), name almost invisible.

Rev.—Silphium with three whorls and seven umbels to l.; to r. palm-tree with fruit; between, ΚΥΡΑΙ (retrograde) upwards; dotted border.

B. M. AR. 0.8. Wt. 124.5 grs.

78. *Obv.*—Similar (different die); no name visible in front.

Rev.—As No. 77; silphium has four whorls; inscription from l. to r. downwards.

Imhoof. AR. 0.85. Wt. 125 grs. Paris: same dies, wt. 112 grs. (much worn and battered) = M. i. 183.

79. *Obv.*—Head of young Dionysos r. with ivy wreath, hair hanging in long curls on both sides of neck; behind, thyrsos; in front, ΘΕΥΦΕΙΔΕΥΞΙ; dotted border.

Rev.—Silphium with six whorls and seven umbels; in field r., ear of barley (?);

K	Y
P	A

Paris. AR. 0.8. Wt. 130 grs.

This group of coins stands closely bound together by weight, legend, types, and style, and it must be studied as a whole. With it goes a copper coin in Turin, *Obv.* Head of Artemis with quiver at shoulder, and ΔΑΜΩΚΥΡΑΝΑ. *Rev.* Nike flying, r. holding wreath and taenia.¹¹⁶

The identity of the head on Nos. 76-8 is open to doubt. The first of the coins to be published (the Paris specimen of No. 78) is in such poor condition, and has besides received such rough usage, that the features at first sight do not much resemble those of the Imhoof specimen. This is due to a blow which can be traced slantwise across the neck, and to the spreading of a crack in the die in front of the forehead. Thus disfigured the head was taken by Müller to be a portrait of Ptolemy I, with which the low weight of the coin seemed to agree. A glance, however, at the head on the Imhoof coin is enough to gainsay this attribution, and the abnormally low weight is sufficiently accounted for by poorness of condition. Svoronos, who published No. 76,¹¹⁷ calls the head Apollo. Imhoof in publishing his specimen of No. 78 prefers Dionysos.¹¹⁸ The crucial factors are the wreath and symbol; as appears from Nos. 76-7 the latter cannot be a thyrsos, can in fact only be a quiver. The wreath is more obscure, though it seems more like ivy than laurel. Apollo the archer we can understand, but what is a quiver to Dionysos? It is tempting

¹¹⁶ M. i. 236 (fg.).

¹¹⁷ *Rev. Num.*, 1892, pp. 212 and 506.

¹¹⁸ *Zur gr. und röm. Münzk.*, p. 246: 1. He also reads Ε and ΠΗ in front of the neck, but a comparison with the other casts from the same and similar dies would show that these "letters" are merely the hair which falls to r. of the neck.

to bring the head into connexion with the reverse type to which it is joined on No. 76. May it not be that of an adolescent Eros with his quiver? As for the ivy wreath, Eros from the fourth century is often closely associated with Dionysos; on occasion he even holds the thyrsos, and fills the place of the god.¹¹³ If it be not Eros, it must be Apollo; for the adjunct is certainly a quiver, and No. 79 and the bronze coin with Artemis mentioned above indicate that in this group the adjunct should be connected with the main type. Whether No. 78 ever bore the name $\Phi\epsilon\iota\Delta\Omega\Nu\Xi$ is doubtful, for in both of the known examples the surface (to judge by casts) leaves much to be desired in the place where No. 76 would lead us to look for the inscription. That both dies are from the same hand is obvious, and in view of the ease with which the name has already disappeared from No. 77, Pheidon may well have signed No. 78 as well.

With No. 79 we face a very different question. At first sight it would seem as if the name $\Theta\epsilon\Upsilon\Phi\epsilon\iota\Delta\epsilon\Upsilon\Xi$ must necessarily bring this coin into line with the rest bearing that name, and that it must therefore belong to the middle of the fourth century. But may there not have been a second $\Theta\epsilon\Upsilon\Phi\epsilon\iota\Delta\epsilon\Upsilon\Xi$, perhaps a descendant of the first? The arguments in favour of this view, though none of them is in itself conclusive, seem to have a cumulative weight which is almost overwhelming.

Assuming that the other issues reading $\Theta\epsilon\Upsilon\Phi\epsilon\iota\Delta\epsilon\Upsilon\Xi$ have been correctly placed before $\text{IA}\xi\text{ONO}\xi$,

¹¹³ See Furtwängler, *Eros in der Vasenmalerei*, p. 41. I owe this suggestion to Mr. Hill.

i. e. about the middle of the fourth century, and also that ΠΟΛΙΑΝΘΕΥΞ is the last of the magistrates whose name appears on the gold, then, if No. 79 is grouped with the other ΘΕΥΦΕΙΔΕΥΞ coins, there would be a gap of more than a quarter of a century between No. 79 and Nos. 75-6, and yet No. 79 has stylistically every mark of being the later of the two. Further, the Attic standard would have been introduced at Cyrene before c. 350 (at a time, too, when we can find no adequate reason for it), to be replaced immediately by the Samian under Iason, then restored again under ΠΟΛΙΑΝΘΕΥΞ. Some smaller points of style may be indicated. All the heads on the coins of ΘΕΥΦΕΙΔΕΥΞ, ΙΑΣΟΝΟΣ, and ΠΟΛΙΑΝΘΕΥΞ (except the latter's gold triobols, and No. 74 A above) are turned to the left, whereas on the coins of ΦΕΙΔΩΝΟΣ and on No. 79, the head is turned to the right. On No. 79, as on coins of ΦΕΙΔΩΝΟΣ, the long hair appears on both sides of the neck, a slightly affected manner common at the end of the fourth century, *e. g.* on some of the gold staters of Alexander, on the Apollo head at Abydos (*B. M. C.: Troas*, p. 2, No. 11 "after 320"), at Metapontum, and at Syracuse under Agathocles. Once more, the silphium on No. 79 bears no resemblance to that on the reverses of ΘΕΥΦΕΙΔΕΥΞ, being much plumper and more florid, while it has a decided affinity to that on the didrachms of ΠΟΛΙΑΝΘΕΥΞ, and on the earliest issue of Rhodian weight which heads the next period.¹²⁰ The innovation in type, too, comes more naturally as a companion innovation to that under ΦΕΙΔΩΝΟΣ than as a unique appearance in a series

¹²⁰ M. i. 148. See below, No. 84.

of Ammon heads. Evidence of another kind is available in the copper coin reading **ΘΕ** (see below, No. 99), and in a gold stater of Attic weight and Alexandrine types, inscribed **ΠΤΟΛΕΜΑΙΩ ΚΥΡΑΝΑΙΟΝ** in Athens. The latter bears as symbol a silphium plant accompanied by **ΘΕΥ**,¹²¹ which shows that after 308 there was a magistrate at Cyrene whose name began with the letters **ΘΕΥ**

The **ΦΕΙΔΩΝΟΣ** group is closely connected with **ΠΟΛΙΑΝΘΕΥΞ** by the inscription **ΔΑΜΩ**, and it can be more suitably placed after, than before, that magistrate, since we have no gold reading **ΦΕΙΔΩΝΟΣ**, and the sequence of types would also be more orderly, as is shown by the following list:

ΘΕΥΦΕΙΔΕΥΞ}
ΙΑΞΟΝΟΣ }

Obv. Head of Ammon l. *Rev.* Silphium **ΚΥΡΑ**

ΠΟΛΙΑΝΘΕΥΞ

Obv. Head of Ammon l. *Rev.* Silphium **ΚΥΡΑ**

ΠΟΛΙΑΝΘΕΥΞ

Obv. Head of Ammon l. *Rev.* Hermes **ΔΑΜΩ ΚΥΡΑ**

ΦΕΙΔΩΝΟΣ

Obv. Head of Eros (?) or Dionysos *Rev.* Eros **ΔΑΜΩ ΚΥΡΑ**

ΦΕΙΔΩΝΟΣ

Obv. Head of Eros (?) or Dionysos *Rev.* Silphium and palm-tree
ΚΥΡΑΝΑ

ΘΕΥΦΕΙΔΕΥΞ

Obv. Head of Dionysos r. *Rev.* Silphium **ΚΥΡΑ**

Issue of Rhodian weight

Obv. Head of Ammon r. *Rev.* Silphium **ΚΥΡΑ**

These pieces of Attic weight had never been considered as a whole till Six published his study of

¹²¹ Svoronos, *Νομίσματα τῶν Πτολεμαίων*, No. 61, Pl. iii. 7.

them.¹²² His conclusions are in brief as follows. The whole group is to be given to the time when Magas was independent of Ptolemy II; and No. 76 refers to the marriage of Magas (whose name Six reads in the fillet on the copper coin referred to above (M. i. 236)) with Apame, princess of Syria, in 274, while No. 75 symbolizes the prosperity and security which trade enjoyed under his reign. Against so late a date there is much to be urged. In the first place the style of Nos. 75-8 can scarcely be brought down so far as 274,¹²³ while, if the chronological sequence of the gold staters as given above be substantially correct, the period during which ΠΟΛΙΑΝΘΕΥΞ coined would then cover about half a century. Further, the theory offers no adequate explanation of the curious inscription ΔΑΜΩΚΥΡΑΝ, or of the types of No. 75, or Nos. 77, 78; and lastly, it would push the whole series of Rhodian didrachms, M. i. 149 seq., which are obviously later than the coins of Attic weight, still further on into the reign of Ptolemy II, though some of the monograms they bear (*e.g.* ΙΡΡ, ΚΕ) occur also on coins of the Egyptian series necessarily assigned to Ptolemy I. If the inscription on the fillet of the bronze coin mentioned above (M. i. 236) exists (of which there is some doubt), and if it is to be read ΜΑΓΑΣ,¹²⁴ that would be decisive in favour of Six's theory. But as

¹²² Six in *Num. Chron.*, 1897, p. 220, and references there to the previous publications of isolated coins by Bompois and Svoronos, and to Müller's recognition of the true interpretation of ΔΑΜΩΚΥΡΑΝΑ as against the former.

¹²³ A point noted by Imhoof in his publication of No. 78, *Zur gr. und röm. Münzk.*, p. 246, No. 7.

¹²⁴ I have not been able to examine either the coin itself or a cast.

it is so uncertain no argument at all can be based on it. Can we find any more adequate explanation of the character and date of these pieces? I think we may, but in order to do so it will be necessary first to summarize the history of the last quarter of the fourth century at Cyrene.

In the year before the death of Alexander the Great, party strife was so violent in the city that one of the factions fled to Cydonia in Crete, where they succeeded in persuading Thimbron, the successor of Harpagus and thus the disposer of very considerable resources, to assume their protection, and attempt their reinstatement. After various turns of fortune the Macedonian adventurer succeeded in investing the city, and so stringent was his pressure that, in spite of the previous purge, party dissensions again showed themselves within the walls. The wealthy citizens fled, some to Thimbron, some to Ptolemy. The satrap of Egypt, eagerly seizing on the occasion, sent an expedition to reinstate the wealthy exiles. This expedition was successful, though Thimbron and the Cyrenaean demos joined hands to face the enemy, and towards the end of the year Ptolemy arrived to finish the conquest in person. We are not informed what the nature of the settlement was, but presumably the position of the wealthy exiles was established at the expense of the demos, while Ophellas, one of Ptolemy's lieutenants, was left at the head of a Macedonian garrison.

· This arrangement was not destined to last long; in 313, when Ptolemy was occupied with Antigonus, revolt broke out afresh, but was soon crushed by an expedition under Agis and Epaenetus. A new

settlement was attempted under which Ophellas was installed as governor. In the next year Ophellas, watching his chance when Ptolemy had marched against Demetrius, asserted his independence. He succeeded in conciliating his subjects, and in maintaining his rule for four years, till, dragged into the African adventure of Agathocles, he perished by Sicilian treachery. Ophellas had early entered into friendly relations with Athens, and had married Eurydice, a daughter of the noble house of Miltiades. Enticed to throw in his lot with Agathocles against the Carthaginians, he approached the Athenians with a view to an alliance, and many Athenians joined him to assist in the conquest of Africa, for the agreement with Agathocles was that the Carthaginian possessions in Africa should fall to Cyrene, those in Sicily to Syracuse. When the expedition had reached the Carthaginian borders after an arduous journey, Ophellas was treacherously murdered, and the remains of his forces, incorporated into the Syracusan army, never saw their homes again. After this blow Cyrene seems to have been easily reconquered for Ptolemy by his stepson Magas in 309-8.¹²⁵

If we may assign our group of coins to the time of Ophellas, we can find a satisfactory explanation of the difficulties. The suggestion is supported by the date of the gold stater reading **ΚΥΡΑΝΑΙΟΝ ΠΤΟΛΕΜΑΙΟΥ ΘΕΥ**, which Svoronos, quite independently of the questions here raised, assigns to the period immediately succeeding the reduction of Cyrene by

¹²⁵ For the history see Diod. xviii. 19 seqq., xix. 79, xx. 40-42, and Justin, xxii. 7.

Magas in 308.¹²⁶ The reasons for putting the didrachm reading ΘΕΥΦΕΙΔΕΥΞ at the end of the group are likewise independent of the assumed date of the royal coin. The origin of the standard used is discussed below, *à propos* of the Attic didrachms of Euesperides. As to the inscription ΔΑΜΩ ΚΥΡΑΝΑΙΟΝ which we find on coins of ΠΟΛΙΑΝΘΕΥΞ and ΦΕΙΔΩΝΟΣ, as well as on the copper, I would suggest that it has a very definite significance, and refers to a restoration of the demos by Ophellas in support of his usurped position. The position of Ophellas was exactly parallel to that of Agathocles, or of the tyrants of earlier times, the democratic basis of whose power is well known. We know that the interference of Ptolemy in 323 led to the reinstatement of the wealthy party as against the demos. It is only reasonable to suppose that the rising in 313, crushed by troops from Egypt, was a counter revolution of the demos against the dependants of Ptolemy. When in the following year Ophellas revolted from Ptolemy, the natural course for him to take would be to pose as the champion of the demos.¹²⁷

It is possible, too, to find a satisfactory explanation of the new types, if we refer the coins to this period. Six's interpretation of the reverse of No. 76, Eros playing the lyre, as alluding to the marriage of Magas, is very attractive. Magas, it is true, seems to be out of the question.¹²⁸ But why not Ophellas? How notable his marriage was politically, we can see from the words

¹²⁶ Svoronos, *loc. cit.*

¹²⁷ The coinage of the restoration after 308 (see Svoronos, Nos. 61 seqq.) with ΠΤΟΛΕΜΑΙΩ ΚΥΡΑΝΑΙΟΝ looks almost like a direct answer to ΔΑΜΩ ΚΥΡΑΝΑΙΟΝ.

¹²⁸ See above, p. 167.

of Diodorus;¹²⁹ and how important a personage was the Athenian heiress, we learn from the fact that after the death of her husband and her return to Athens she married no less a person than Demetrius Poliorcetes.¹³⁰

Along the same lines we can get an adequate explanation of the Hermes on a reverse of ΠΟΛΙΑΝΘΕΥΞ (No. 75), which precedes the coin of ΦΕΙΔΩΝΟΣ. Six explains the type of Hermes as being simply a general reference to the commercial prosperity of the age. Surely a more complete explanation is needed for so startling an innovation, for this is the first silver coin (except a few small fractions) in the whole Cyrenaic series which does not show the silphium plant, or its seed, as a main type. Hermes is doubly connected with Aphrodite, as a god of fertility and as a guide. He it is who brings together Aphrodite and Anchises, Eurydice and Orpheus, Omphale and Heracles. On a fine relief from South Italy¹³¹ we find him standing with caduceus, facing Aphrodite, on whose arm is Eros holding the lyre (as on No. 76). At Athens, the home of Ophellas's bride, we find a cult of Hermes Ψιθυριστής, Aphrodite, and Eros Ψίθυρος.¹³² It does not, then, seem too fanciful to see in the Hermes type another allusion to the marriage of Ophellas. The head on the issues of

¹²⁹ XX. 40. 'Ο δὲ Ὀφέλλας . . . πρὸς μὲν Ἀθηναίους περὶ συμμαχίας διέπιμπτο γεγραμκῶς Εὐθυδικῇ τῇ Μιλτιάδου θυγατρὶ τοῦ τὴν προσηγορίαν φέροντος εἰς τὸν στρατηγήσαντα τῶν ἐν Μαραθῶνι νικητῶντων. διὰ δὲ ταύτην τὴν ἐπιγαμίαν καὶ τὴν ἄλλην σπουδὴν (ἣν) ἐπῆρχεν ἀποδεδογμένος εἰς τὴν πόλιν καὶ πολλοὶ τῶν Ἀθηναίων προθύμως ἐπήκουσαν εἰς τὴν στρατείαν [against Carthage].

¹³⁰ Plutarch, *Vit. Dem.* xiv. who calls her Eurydice, whereas in Diodorus the name is Euthydice.

¹³¹ Figured in Roscher's *Lexicon*, s. v. Eros, vol. i, p. 1351.

¹³² Pauly-Wissowa, s. v. Hermes, 8. 1, cols. 741, 757.

ΦΕΙΔΩΝΟΣ, if it be accepted as an adolescent Eros, makes another link in the chain.

Ophellas's *coup d'état* presents a sufficient explanation of the bronze coin with the type of Nike and the inscription ΔΑΜΩΚΥΡΑΝΑ, while the Carthaginian adventure gives a reason for the appearance of the palm-tree side by side with the silphium on Nos. 77 and 78. Agathocles and Ophellas had arranged that the one should take the Sicilian, the other the African possessions of Carthage, and for the latter to show the type of Carthage on his coins would be but to anticipate the realization of a by no means fantastic project. In this connexion a small point is perhaps worth recording. The treatment of the hair on Nos. 76-9 whereby the locks appear on either side of the neck has been noted above, as also the fact that the same treatment makes its appearance for the first time at exactly the same date on the Korê-heads of Agathocles (310-304 B.C.).¹³³

Barce, later issues.

The coinage of Barce during the opening years of this period was described above. Thereafter it undergoes an almost complete eclipse. The latest tetradrachm (No. 44) has been already mentioned, and its similarity to the issues of ΘΕΥΦΕΙΔΕΥΣ and ΙΑΣΩΝΟΣ pointed out. This would indicate a date of about 360-50. There is also in the Berlin collection (late Fox)¹³⁴ a silver coin of very unusual weight with the magistrate's name ΤΙΜΟΚΡΑΤΕΥΣ. The style of the beardless head on the obverse, and of the florid silphium on the

¹³³ *Hist. Num.*², p. 181.

¹³⁴ Fox, *Engravings*, Pt. I, Pl. viii. 167. M., Suppl., 325 A.

reverse, would suggest that it is contemporary with the ΠΟΛΙΑΝΘΕΥΞ issues. The weight of the coin is 159·8 grs., but it has lost a certain amount by oxydization. In this connexion may be noted another issue, of somewhat later style, the weights of which are 80-90 grs.¹²⁵ The standard which appears here will be discussed later.

Three copper coins are assigned to Barce by Müller.¹²⁶ The first shows the same types as the copper of Cyrene M. i. 247-9, and it may be surmised (especially as the publication is due to Sestini) that it properly belongs there. The last is a coin formerly in the possession of the Society of Antiquaries of Scotland, and published in the *Numismatic Chronicle*.¹²⁷ The types are *Obv.* Head of bearded Ammon r., *Rev.* Eagle l.; to l. upwards, ΒΑΡΚΑΙ. The flan of the coin is, as the illustration shows, of the regular Ptolemaic form with bevelled edge and cracked rim, and the piece belongs to the third or second century. No other example is forthcoming, and this one has disappeared from sight. It may be suggested that the inscription is simply ΠΤΟΛΕΜΑΙ[ΟΥ ΒΑΣΙΛΕΩΣ] misread—the whole of the field behind the eagle where ΒΑΣΙΛΕΩΣ would have stood is off the coin—and that the coin is really a common Ptolemaic coin such as Svoronos, *op. cit.*, No. 453. The description of the second of the three (M. i. 330) is as follows:

80. *Obv.*—Free horse cantering r.; above ΒΑ; dotted border.

Rev.—Ram standing r.; above ΗΡ? Α; dotted border.

Paris. *Æ.* 0·65. Wt. 105 grs. = M., No. 330.

¹²⁵ M. i. 47, &c.

¹²⁶ M. i. 229-331.

¹²⁷ *Num. Chron.*, 1852, p. 144 (fig.).

Unfortunately the inscription on the reverse is not clear: the **A** is certain, and the preceding letter has been read as a **B** by Müller, who regards it as the initial, thus producing the same inscription on both sides. On a close examination of the coin I think **HPA** may be the true reading. The following would support this view.

81. *Obv.*—Head of Ammon bearded r.; dotted border.

Rev.—Ram r.; above **HPAKΛEID.**

Paris. *Æ.* 0.1. Wt. 187 grs. = M., No. 343.

No. 81 was published by Müller doubtfully as of the town Heraclea,¹³⁸ but the last letter is certainly a **Δ**, and the inscription must therefore be a name; there would be room for an ethnic on the obverse in front of the face (but on this unique specimen that portion of the field is off the flan). The type of the ram is proved for Barce as well by the archaic silver drachm¹³⁹ as by our No. 80. These two bronze coins would belong to the end of the fourth or the beginning of the third century.

Euesperides, Later Issues.

The coinage of Euesperides, like that of Barce, practically ceases during the fourth century. There is, however, in the Turin Library¹⁴⁰ a tetradrachm of Samian weight, which to judge by the triple border¹⁴¹ of the obverse and the full inscription **ΕΥΕΞΠΕΡΙΤΑΝ** should

¹³⁸ M. i. 343.

¹³⁹ M., Suppl., 290 A (Brit. Mus.).

¹⁴⁰ Imhoof in *Z. f. N.*, vii. p. 30, No. 3. I have been unable to get a cast of this coin.

¹⁴¹ Cf. the triple border on the coins of Barce with the facing head under **ΑΚΕΞΙΟΞ** (M. i. 321).

belong to the first half of the fourth century. There is also another silver coin of later date in the Luynes collection, Paris :

82. *Obv.*—Head of river nymph r., wearing wreath of lilies(?) and water plants; the hair is long and falls on either side of the neck; behind, ΕΞΠΕΡΙ - - - ζ outwards; dotted border.

Rev.—Goat r.; before him silphium with three whorls; beneath, silphium with two whorls; behind, ΤΙΜΑΓΩΡΑ ζ; linear border.

Paris (Luynes). M. i. 334. A. 0-S. Wt. 130 grs.

The animal on the reverse has been explained as a gazelle,¹⁴² but its awkward motions, its characteristic attitude, its tail and possible beard all seem rather to suggest (as Müller noted¹⁴³) a goat. The head on the obverse has been described as the river-god Lethon. Doubtless it is to be brought into connexion with the copper coins¹⁴⁴ showing a head inscribed ΑΗΤΩΝ or ΑΗΘΩΝ, but both of these heads seem to be feminine. The only real difference between the two types is that the one has long hair, while on the other the hair is rolled; both seem to have a wreath of water plants, though on the copper it is not so elaborate. As for the alleged horn on the silver coin, which is the real ground for the designation river-god, it seems to be merely the bud of some water plant, perhaps a lily. The weight of this coin and its style—especially such a detail as the appearance of the hair on either side of the neck—bring it into line with the issues of ΠΟΛΙΑΝΘΕΥΞ-ΘΕΥΦΕΙΔΕΥΞ.

¹⁴² Imhoof-Blumer u. Keller, *Tier- und Pflanzenbilder*, Pl. iii. 4.

¹⁴³ Müller, *op. cit.*, i. 92, note 3.

¹⁴⁴ M. i. 338-9, where the wreath is called a diadem.

For the return to the Attic standard at Euesperides as well as at Cyrene, in these coins of the close of the fourth century, there must be some definite explanation, and it seems best found in the spread of Alexander's currency and in the decimal ratio of gold to silver of which that currency was the sign.¹⁴⁵ There is no reason why any of these coins should be earlier than 430, while arguments have been adduced to show that most of them are later than 312. It may be asked why in such a case should we find an Attic didrachm instead of the tetradrachm, the unit of Alexander's currency. It has been suggested above that one of the reasons of the popularity of the little gold piece of 13.3 grs. was that when it first was issued it was the exact equivalent of a Samian tetradrachm. At the decimal ratio the little gold piece is still the equivalent of the silver unit if that unit be an Attic didrachm. Similarly, when in Ptolemaic times the Rhodian didrachm supersedes the Attic as the unit, the weight of the little gold piece drops in sympathy to just over 11 grs.

Besides the bronze coins, with the head of Lethon or Leton, which may be a little earlier than the silver, there are two other issues. One has a head of Zeus Ammon, laureate, on the obverse, and on the reverse a trident and EY.¹⁴⁶ The style of this head very strongly recalls the head of Zeus Eleutherios on the last issues of the Syracusan democracy before Agathocles,¹⁴⁷ and suggests that it is of the same date, c. 320. The other seems not to have been noticed before:

¹⁴⁵ Reinach, *L'Histoire par les monnaies*, p. 73.

¹⁴⁶ M. i. 337-8.

¹⁴⁷ *B. M. C. : Sicily*, p. 189, Nos. 313 seqq.

82 a. *Obv.*—Head of youthful Ammon l.

Rev.—Silphium; Ε Υ

Athens. Æ. 0.5.

This coin and the two others just mentioned presumably stand in a ratio of value to each other of 1 : 2 : 4.

Before leaving the silver coinage of the fourth century we may notice some smaller fractions which have nothing to indicate the place of issue. Fractions, even drachms, of this period are comparatively rare, and these coins are interesting besides for their unusual types.

83. *Obv.*—Head of Zeus Ammon bearded r.; dotted border.

Rev.—Eagle standing r., its head turned to l.; dotted border.

Paris. Æ. 0.3. Wt. 7.5 grs. Samian obol.

83 A. *Obv.*—Head of Zeus Ammon bearded, facing, inclined to r.

Rev.—Ram (?) standing r. in front of palm-tree.

Paris. Æ. 0.35. Wt. 7.6 grs. Samian obol.

The head on the first of these little coins recalls that on the gold tenths of ΚΥΘ - - (No. 62, above). At first sight, judging by the reverse type, otherwise unknown at Cyrene, we might seem to be in Ptolemaic times, but apart from questions of style the eagle has its wings shut tight and its head turned back, while the weight is most satisfactorily explained as a Samian obol (8.7 max.). No. 83 A shows on its reverse the scheme of animal and palm-tree which we meet with in the Carthaginian series and in archaic times at Barce (No. 3). The weight of these two coins would place them before the group of Attic weight under ΠΟΛΙΑΝΘΕΥΞ. Connected by type with the last is the little coin published

by Dressel¹⁴⁸ with the types *Obv.* Head of Ammon facing, *Rev.* Head of Pallas r. The weight of this piece is 6 grs., while a specimen in the British Museum weighs 4.4 grs., and the denomination is therefore probably an Attic hemiobol. The use of the Attic standard implies the period of ΠΟΛΙΑΝΘΕΥΞ or later, a dating which is confirmed by the style of the copper issue of exactly similar types published by Babelon.¹⁴⁹ The shortage of small silver coins towards the end of the period is doubtless to be explained by the introduction of a copper coinage, at first unsigned, and then (in early Ptolemaic times) with magistrates' names. That these copper issues did not in general begin till the close of the period is indicated by the form of the silphium, which corresponds to that on the ΠΟΛΙΑΝΘΕΥΞ-ΦΕΙΔΩΝΟΣ-ΘΕΥΦΕΙΔΕΥΞ silver, and by the lack of any correspondence between magistrates' names on the two metals. As it is difficult to divide them, and as most of them belong to the third century, they are best considered later.

E. S. G. ROBINSON.

¹⁴⁸ *Z. f. N.*, xxiv. p. 91, Pl. iv. 8.

¹⁴⁹ *Rev. Num.*, 1885, p. 398, No. 6, Pl. xv. 6. One of the British Museum specimens (= *B. M. C.: Lycia, &c.*, p. 262, No. 54) has a symbol (pileus) behind the head.

(To be continued.)

VI.

CROTON.

(SEE PLATE VIII.)

1. THE LATER SILVER STATERS.

IN *Historia Numorum*², p. 98, Head gives a broad description of one class of staters belonging to the years B.C. 330-299.

ΚΡΟΤΩΝΙΑΤΑΝ Eagle on olive-branch, with spread wings. [Pl. VIII. 7.]

Tripod with conical cover.
Symbols. Ear of corn and Python.


Letters and monograms. Various. *R.* Staters, c. 118 grs.

He adds:¹ "It will be remarked that the staters of Croton, from first to last, are of full weight, averaging 120-118 grs. Of course we often meet with specimens both heavier and lighter, but the evidence all tends to prove that no legal reduction took place at Croton as it certainly did at Tarentum, Heraclea, Thurium, &c., *circ.* B.C. 281. The inference is that no staters were struck at Croton after B.C. 299."

These Croton coins of obviously late workmanship need further consideration, more especially as there is an obverse type, existing, so far as I have observed, in three main varieties, and not noticed by Head. The type to which I refer is that of an eagle, with head

¹ Cp. Evans, *Horsemen of Tarentum*, p. 138, "..... at Kroton, sacked by Agathokles in 299, no didrachms or silver staters of reduced weight are forthcoming . . ."

turned back, standing upon a *thunderbolt*. In the field above are letters or a monogram. The specimens known to me may be described as follows. Unless otherwise stated the coin is in the McClean collection, a full catalogue of which is now being prepared.

1. (a) *Obv.*—Eagle, l., head turned back; standing with closed wings on thunderbolt; to l. and r. above,


Rev.—KPO to l., inwards. Tripod lebes; to r., caduceus, upwards; plain exergual line. Wt. 92.6 grs. (6.0 grms.). [Pl. VIII. 9.]

- (b) *Another specimen of the same (with caduceus).* Milan Sale, April 27, 1911, No. 116. Wt. 93.4 grs. (6.05 grms.).

- (c) *Another specimen.* Strozzi Sale, No. 1227. Weight not given.

2. (a) *Obv.*—The same.

Rev.—KP[O] to r. inwards. Tripod lebes; to l., cornucopiae; ex. and lower part of tripod off flan. Wt. 101.5 grs. (6.58 grms.). [Pl. VIII. 10.]

- (b) *Another specimen.* Hartwig Sale, No. 451. Wt. 101 grs. (6.55 grms.).

3. (a) *Obv.*—The same, but eagle r. and, to r., bearded terminal figure of Hermes, l., holding phiale in extended r. hand and caduceus in l. hand to side. Thunderbolt indistinct.

Rev.—KPO to r., inwards. Tripod lebes; to l., Nike flying, r., the upper part off flan; double exergual line. Wt. 102.6 grs. (6.65 grms.). [Pl. VIII. 11.]

- (b) *Another specimen.* Hunter, Pl. IX. 18. Wt. 101 grs. (6.54 grms.). From the same dies? Assigned to c. 420–390 B.C.

- (c) *Another specimen.* Hirsch Catalogue, XIII, No. 223. Same obverse die. Reverse varied. Wt. 93.8 grs. (6.08 grms.). (Catalogue reading QPO an error?)

- (d) *Another specimen.* Benson Sale, No. 121 = Archaeologist and Traveller Sale, No. 28. Reverse varied. Wt. 102 grs. (6.6 grms.) or 103 grs. Thunderbolt very clear.
- (e) *Another specimen.* Milan Sale, April 27, 1911, No. 115. Reverse as last. Wt. 94.6 grs. (6.13 grms.). Thunderbolt very clear.
- (f) *Another specimen.* Paris Sale, March 24, 1902, No. 368. Weight not given. Thunderbolt very clear.
- (g) *Another specimen.* Hirsch Catalogue, XVI, No. 178. Wt. 104.2 grs. (6.75 grms.).
- (h) *Another specimen.* Hartwig Sale, No. 452. No weight given.
4. (a) *Obv.*—Eagle r., standing with closed wings on thunderbolt; head turned back; to l. and r. above, **N I**.
Rev.—Tripod lebes; to r., Nike flying l. to crown tripod.
 Maddalena Sale, Pl. IV. 17, No. 516. Wt. 98.4 grs. (6.38 grms.).
- (b) *Another specimen* (to judge from the Plate) seems to be Caprotti Sale, No. 263, where the catalogue description gives **Φ I (?)**. Wt. 94.9 grs. (6.15 grms.).
- (c) *Another specimen.* Paris Sale, June 22, 1906, No. 137. Weight not given.
- (d) *Another specimen.* Genoa Sale, April 26, 1909, No. 1023. Weight not given.
5. (a) *Obv.*—Similar, but above, **K**.
Rev.—Similar, but Nike to l., flying r.
 Hirsch Catalogue, XXXI, No. 111. Wt. 96.4 grs. (6.25 grms.).
6. (a) *Obv.*—Similar, reading **Φ I**. Eagle's head not turned back (unique in this respect?).
Rev.—As before.
 Milan Sale, April 27, 1911, No. 114. Wt. 95.7 grs. (6.2 grms.).

7. (a) *Obv.*—Eagle standing r. on thunderbolt; head turned back; above to l., Φ (Φ K); to r., wreath.

Rev.—Die of Benson Sale, No. 121 (see above 3 d).
Wt. 96.4 grs. (6.25 grms.). [Pl. VIII. 12.]

- (b) *Another specimen.* *Rev.* varied, no Victory but KPO inwards. Wt. 99.4 grs. (6.44 grms.). [Pl. VIII. 13.]

- (c) *Another specimen.* Monogram blurred. On *rev.*, to r., Nike flying l. to crown tripod; inser. as in last; from the Babington Sale, No. 41. Wt. 100 grs. (6.48 grms.). [Pl. VIII. 14.]

- (d) *Another specimen.* Ward, No. 110. W. 96.6 grs. (6.26 grms.).

- (e) *Another specimen.* Hirsch Catalogue, XV, No. 789 = Chevalier dell' Erba Sale, No. 137? Wt. 103.5 grs. (6.73 grms.).

8. (a) *Obv.*—Eagle l., head turned back, standing with spread wings on olive-branch. ΚΡΟΤΩΝΙΑ-
ΤΑΝ following the curve of the wing.

Rev.—Tripod lebes with two handles and conical cover; in field l., ear of barley, with leaf to l., and Φ ; in field r., K, P, Φ Ml, above to l., and below a dolphin; linear circle.

From the Maddalena Sale, No. 517 = Hirsch Catalogue, XV, No. 795. Wt. 101.5 grs. (6.57 grms.). [Pl. VIII. 8.]

- (b) *Another specimen.* Wt. 96 grs. (6.22 grms.).

- (c) *Another specimen.* B.M. 82. Wt. 101.5 grs. (6.57 grms.).

- (d) *Another specimen.* Hunter, No. 39. Wt. 99.5 grs. (6.45 grms.).

- (e) *Another specimen.* Bunbury Sale(1), No. 209. Weight not given.

- (f) *Another specimen.* Hirsch Catalogue, XXX, No. 289. Wt. 96.4 grs. (6.25 grms.).

No specimen of these eight varieties is given in Carelli or Garrucci. The coin last described may be

the earliest of the series. The eagle stands on an olive-branch as on Croton coins of the fifth century, and a border encloses the reverse type. But in any case the reverse type and the distribution of the symbols there are copied from the coin with the python and corn-ear symbols.² It is here described last because it is generally well known and universally accepted as late. The monogram Ψ on No. 7 brings that set into close relation with No. 8. But the reverse die of 7*a* is combined with an obverse with the small Hermes figure in 3*d*. As this last coin reads Φ 1 on the obverse, it involves, in turn, all the other coins which read those letters (Nos. 1 and 2). Nos. 4 and 5 reading \mathbf{N} 1 and \mathbf{K} are linked to the other groups by the occurrence of the letters, or by the Victory on the reverse.

As these reasons may appear somewhat fortuitous, and as it is necessary to establish the contemporary character of these issues, I would again call attention to the thunderbolt upon which the eagle stands in all coins except those of set 8, and to a still more remarkable link. These thirty coins are all the specimens of the types which I have been able to collect from the British Museum, Hunter, Ward, Warren, Leake, and McClean collections, and from the Sale Catalogues of the past thirty years. In six cases the weight was not given. Of the remaining twenty-four, 3*g* is the highest in weight—104.2 grs. The coins seem to afford positive proof that the reduced standard, whatever its origin, was employed at Croton.

² It will be found below that there are some reasons for supposing that the fourth-century Apollo head type was also copied in the period to which I shall attribute the coins already described.

It may be objected that although these coins may very well go together, light specimens are often found in the earlier Croton coins of the ordinary standard. This is, indeed, implied by the statement in *Historia Numorum* quoted above. In the *B. M. Catalogue*, Nos. 63-102 represent the *Period of Finest Art*. With the exception of Nos. 65 and 79, which are plated, and No. 82 (described above, 8 c), the only coins weighing less than 110 grs. are Nos. 93 (104.4 grs.) and 102 (107.4 grs.). Of twenty-three specimens of the same types in the McClean cabinet one weighs 109.5 grs. and another 107 grs. In the Leake collection, Nos. 10, 11, 12, 15, 18 (see *Catalogue*, pp. 118-19) are all under 110 grs., and in two cases under 100 grs. But Nos. 12 and 18 are certainly forgeries, and No. 15 a plated coin. No. 10 will be mentioned again below. Hunter *Catalogue*, Nos. 22, 23, 26 weigh 106.2, 107.9, and 104.0 grs. respectively. Of these, the last is seen from the Plate to have lost a few grains from later damage. Of nine specimens in the Warren and five in the Ward collections no coin falls below c. 112 grs. with the exception of Ward 110 already described above (6 d). An exhaustive analysis of the sale catalogues would show that good specimens of that period rarely fall below c. 115-112 grs.

In forty specimens of the later coin showing the head of Apollo on the obverse, I found that twenty-nine weighed over 110 grs. and eight between 110-105 grs., though only one of these fell below 107.4 grs. (Hartwig Sale, No. 475, 105.3 grs.). The three other examples are Ward, No. 113 (98 grs.), and two coins in the McClean collection, which weigh 88.5 and 100 grs. respectively. It is possible that these coins are to be

included with the other varieties of light weight staters. In style the two McClean specimens are extremely poor, but this remark applies to a number of specimens of high weight. Compare, however, the high weight and low weight specimens on **Pl. VIII. 15, 16.**

The coin with the python and corn-ear symbols on the reverse, which was described at the beginning, does not belong to the series under discussion. Whether it belongs to the years 330-299 B.C. is, for our purpose, immaterial. It is separated from these coins by its heavier weight, the border on the obverse, the set of the spread wings, which resembles many other Croton coins of heavy weight, and is quite different from the type discussed under No. 8 above, and by the finer workmanship, though it is unnecessary to use the insecure argument too often afforded by grounds of style. Moreover, though Dr. Head took it as the typical example of the period and series to which he ascribed it, it is a coin which never carries a letter or monogram; at least, I cannot find a specimen which does so. Those known to me are McClean (**Pl. VIII. 7**); B. M. 83; Ward 109; Benson Sale, No. 120; Milan Catalogue, May 13, 1912, No. 333; Hartwig Sale, No. 453; Hirsch Catalogues, XV, No. 796; XVI, No. 173; XX, No. 84; XXX, Nos. 290, 291. The lowest weight of any of these specimens is the 117.2 grs. of B. M. 83. There is, indeed, the coin in the Leake collection (No. 10 in the catalogue) weighing 106.1 grs. This specimen had seemed to me a forgery before I had examined the weights, and Mr. G. F. Hill, who has since seen the Leake coin, agrees that it is false. This type belongs, in my opinion, to the later fifth century series—not later than the reverse type which shows

Apollo shooting at the Python, the tripod standing between them.

The circumstances under which the coins described were struck must now be considered. Every possible date, from the early fifth century downwards, has been suggested for various specimens in the catalogues. Thus 3*d* is dated 480-420 B.C. in the Archaeologist and Traveller Catalogue; 3*b*, the Hunter specimen, to c. 420-390 B.C. Hirsch, XV, 789 (7*e*), has the monogram catalogued as \mathfrak{P} (the *top* part is off the flan), and the coin is termed an alliance coin with Locri. The coins have some points of contact with later Locrian types; but the Locrian coins keep the heavier weight. The period of Alexander the Molossian (c. 330 B.C.) has also been suggested. Lastly, and as I believe correctly, 1*c* is described in the Strozzi Catalogue as *frappé probablement lors de l'invasion épirote*.

It is unnecessary to record at length how the Tarentine didrachms were finally reduced in weight after the appearance of Pyrrhus in Italy in 282 B.C. The new standard was the six-scruple standard (c. 105 grs.) to which the Romano-Campanian staters had been reduced as early as 312 B.C., but at the same time Epirote emblems were put on the coins of Tarentum. Other towns, including Thurium and Heraclea, were obliged to follow suit in the reduction of weight. Apart from the reduced weight of our Croton coins, the main type of the eagle on the thunderbolt is "characteristically Epirote" (Evans, *Horsemen of Tarentum*, p. 140). But if Agathocles sacked Croton in 299 B.C. how could coins be struck there at a later date? The answer is that the Romans established a garrison there, but this garrison was annihilated by

a Campanian legion which revolted from Rome in 280 B.C. In 277 B.C. the Romans again got possession of the place. It is to these years that I would attribute the coins. To what extent the Campanians sympathized with Pyrrhus does not seem to be recorded. "Many Samnites, Lucanians, and Bruttians flocked to Pyrrhus's standard, but it is rightly conjectured that they mostly served in guerilla warfare." Holm, *History of Greece*, iv, p. 177 (English ed.).

The only alternative open would be to assume that the reduction of weight was first definitely employed by Croton, and introduced between 312-299 B.C. Although the Tarentine issue of light staters was definitely fixed c. 281 B.C., the weight had been falling for some years before.³ On the other hand, the occurrence of the thunderbolt on the Croton coins would then be unexplained, and it seems as though the symbol must be brought into connexion with Pyrrhus. And if the three very light staters with the Apollo head belong to the reduced series it is worth while noting that this type makes its appearance on reduced staters at Thurium which are dated c. 281 B.C.⁴ Finally, it may be noted that although the names of magistrates are often given in full on the reduced series of Tarentum and Heraclea, only abbreviated forms occur at Thurium, and on these coins of Croton.

³ In the absence of some definite symbol, such as the triskeles, the coins cannot be brought into relation with Agathocles, although he had reduced the weight of the silver Pegasi at Syracuse to c. 108 grs. a few years before he captured Croton.

⁴ It may be that the Apollo series should be dated from c. 370 B.C.-299 B.C., and that those of light weight were struck after 312 B.C. This would explain the poor style of many specimens, and help to fill the gap now left in the Croton series.

It may be objected that the coins are too numerous to be the relics of a period of less than three years' duration. The converse is equally true that they are too few in number for a period extending over thirty years, from 330-299 B.C. But it has been shown that within the group there are many varieties with few specimens of each variety. This considerably lessens the necessity of extending the series over a long period, and it may be added that the coins hardly ever seem to come from worn dies.

There are, then, some grounds for supposing that the stater was reduced at Croton as elsewhere, and the most probable date for this reduction lies between the years 280-277 B.C. If these coins of reduced weight be assigned to that period, the way is open for a reconsideration of the fourth-century coinage of Croton, as the period 330-299 B.C. is now left without any silver issue.

2. TWO FIFTH-CENTURY STATERS.

1. *Obv.*—☉PO to r. outwards. Tripod lebes with three handles; to l., cantharus; dotted exergual line and border.

Rev.—Tripod lebes in relief; to l., PA outwards; dotted exergual line and border.

Æ. 20.5 mm. ↗ *Wt.* 118.4 grs. (7.68 grms.). [*Pl.* VIII. 5.]

The interest of this coin lies in the letters on the reverse. The die is that of B. M., 47; Ward, 105; Benson Sale, No. 109; Sale Catalogue, Paris, March 27, 1899, Pl. I. 13. On the first two specimens the tail of the first letter is off the flan, and the letters have been read as DA, the coin thus becoming evidence for a presumed Zancle-Messana alliance.⁵ Mr. Hill, who has

⁵ Hill, *Coins of Sicily*, p. 71; Dodd, *J.H.S.*, 1908, xxviii, p. 68.

seen this coin, thinks that the tail is possibly an engraver's blunder; there is a small kink in the down-stroke, and he may be right. If PA be correct a parallel for the difference in size between the two letters may be found at Croton itself (though not at this period) in $\text{M}\Delta$ of the later Herakles reverse type.

I have not succeeded in finding a specimen of this coin from a different die.

2. *Obv.*—Eagle l., standing with head raised and wings spread; below, to l., crab; in ex. and around to r., $\text{BOI}\Sigma \text{KOY}$; plain exergual line; linear circle.

Rev.— QPO to r., outwards. Tripod lebes with fillet attached to l. handle; linear circle.

R. 20 mm. \downarrow Wt. 123 grs. (.797 grms.). [Pl. VIII. 6.]

Coins with the first three letters of the magistrate's name are well known, but I can only find this variety mentioned in Garrucci, *Monete d'Italia*, where the description on p. 151 does not agree with the illustration, Pl. CIX. 28. In the illustration a small eagle with spread wings takes the place of the crab seen on the McClean specimen.

3. LAUS AND SYBARIS—SYBARIS AND CROTON.

1. *Obv.*— $\text{OM} \Sigma \text{AA}$ above and in ex. Bull standing r.; short plain exergual line; border of dots.

Rev.— $\begin{smallmatrix} \text{V} & \text{M} \\ \text{A} & \text{A} \end{smallmatrix}$ above and below two phialae, between which a dot; all in linear circle.

R. 10.5 mm. \swarrow Wt. 11.7 grs. (.76 gm.) [Pl. VIII. 1.]

The reading of the obverse, which is quite certain, is due to Mr. E. S. G. Robinson. The coin must refer to the events of 453 B.C. when Sybaris, destroyed by

Croton in 510 B.C., was refounded near the old site by the help of Poseidonia. Coins celebrating that alliance are well known, and the piece described here agrees not only in fabric but in the reverse type of the two phialae which is also found on the small pieces reading $\text{O}\Gamma$ — VM . It may be noted that in both cases the name of Sybaris goes with the phialae type, and the bull (which does not appear to be androcephalous) typifies Laus. We have, then, clear evidence that Laus also took part in the recolonization of Sybaris.

It is perhaps worth noting that during these years Sybaris struck the small silver coin with a bird, usually described as a dove, for reverse type. [PL. VIII. 2.] The bird closely resembles the crow on the bronze coins of Laus dated to c. 400–350 B.C. [PL. VIII. 3.] No silver coins of Laus with the bird are known, but it is possible that the type on the coin of Sybaris is in some way connected with Laus.

2. *Obv.*—Bull standing l., head turned back; plain exergual line; border of dots between lines.

Rev.—Tripod lebes; plain exergual line; incuse border of radiating lines.

R 12 mm. \uparrow Wt. 19.0 grs. (1.23 grms.). [PL. VIII. 4.]

This coin must be of the same date, and refer to the same event as that just described. An early alliance stater dating before 510 B.C. was issued by Sybaris and Croton (*B. M. Guide*, Pl. 8. 21), but in view of the later relations between them, and the fact that Sybaris was again destroyed by Croton in 448 B.C., this piece is somewhat remarkable. Although the Sybarite type occupies the obverse field I infer from the fabric that the piece was struck at Croton; the borders, for example, though found on coins of Sybaris are treated in

a manner resembling much more closely the Croton staters of 480-450 B.C.

I had thought that the coin might have been struck by Croton as a cynical reference to the second foundation of Sybaris, or, indeed, to the second destruction, but had dismissed the idea as wild conjecture. I find, however, through the note in Hill's *Historical Greek Coins*, p. 50, that the latter view has actually been maintained by von Duhn (*Zeit. für Num.*, vii, p. 310), and Busolt (*Gr. Gesch.*, ii², p. 770), in reference to the early incuse stater mentioned above. If this solution be correct, the difficulty of having the Croton type on the reverse is accentuated. But the explanation may be found in purely technical reasons—the high relief of the bull type which needed more careful guarding. The relations existing between Croton and Sybaris are greatly in favour of our entering in this case “the way for a revision of the accepted interpretation of ‘alliance coinages’” (Hill., *op. cit.*).

S. W. GROSE.

VII.

THE IRISH COINAGES OF HENRY VIII AND EDWARD VI.

(SEE PLATE IX.)

As the line of division between these two groups of coins is still ill-defined, I propose to consider in the following pages the numismatic history of both reigns as far as it is concerned with Ireland. I shall hope to establish a basis of classification, and to prove beyond doubt that the Irish coins of Henry VIII were struck at the Tower of London and Bristol Castle, and those of Edward VI at Dublin Castle.

The subject of this paper has been previously discussed in the *Numismatic Chronicle* on three occasions. (1) By Dr. Aquilla Smith in N.S., xix. 157, who dealt with Henry VIII only. (2) By Archdeacon Pownall in 3rd S., i. 48, when he drew certain inferences as to shillings struck in Edward's period. And (3) by Sir John Evans in 3rd S., vi. 114, in the later part of his article entitled "The debased coinage bearing the name of Henry VIII". I shall therefore refrain from quoting authorities alluded to by these writers, unless the continuity of the story demands a repetition. Since the three papers were written only one text-book has been published, viz. *The Handbook of the Coins of Great Britain and Ireland in the British Museum* (1899), by Mr. H. A. Grueber. On pp. 229-30

of that work Mr. Grueber expressed doubt as to some of the attributions to Edward VI, and said that "the question of the Irish coinage during this reign still remains undecided". Consequently I was tempted to search for such additional evidence as might exist, and I now offer to the Society the results of the inquiry arranged in chronological order.

Dr. Aquilla Smith apparently thought that there was a mint in Ireland at some time during Henry's reign, as he quotes in full on pp. 180-82 of his paper the Latin text and a translation of a privy seal writ granting to John Estrete the mastership of the coinage in that island, under date 26 March, 2 Henry VIII, 1511 (Harley MSS. 4004). The inference to be drawn from this appointment was most disconcerting to my theory that the King's Irish money was exclusively struck in England, but an investigation showed that the author had presumably been misled by the catalogue of the Harleian manuscripts, which was printed in 1808. The copy of the grant begins "Henricus", without descriptive numerals, and the document had been assigned to the eighth king of that name, whereas in fact the office was conferred on Estrete by Henry VII. An enrolment of the grant can be seen among the letters patent of 26 March, 1487; accordingly, the obstacle vanishes from the period 1509-46.

Turning now to the history of the coinage struck by Henry VIII for circulation in Ireland, the preliminary difficulty was to fix the date of the earliest issue. There is no doubt that money was sent to Ireland during the first twenty years of the reign, but I failed to trace any evidence that the "treasure" was other than English silver coin, which, as Dr. Smith

tells us, has been found in great abundance in that country. Seeing that James Simon in his *Essay on Irish Coins*, Dr. Smith, and Mr. Grueber each held divergent views as to when the first issue was made, and that the point was of some importance, I examined the Exchequer accounts relating to mint affairs at the Tower from 1509 to 1535 or thereabouts. The result was entirely negative, there being no allusion to the coining of such money, notwithstanding that the accounts were fairly complete and continuous during that period of, say, twenty-five years. There is also the fact that when Wolsey reorganized and altered the English coinage in 1526 his reports did not mention the existence of an Irish currency. I also examined the Irish State Papers, and the immense collection of documents, from many sources and on all subjects, which have been brought together in the printed volumes known as *The Letters and Papers of Henry VIII*, but without finding any clues between 1509 and 1535. There were, however, suggestions as to the desirability of a separate coinage. The first indication which rewarded my quest was in an Exchequer account from Michaelmas, 1536, to the same day in 1537, prepared by the successive wardens of the Tower mint. The document recited that letters patent had been directed to Ralph Rowlet and Martin Bowes, the master-workers, on 6 March, 27 Henry VIII (1535-6), authorizing them to strike silver coins for Ireland. During the year in question 2,345 lbs. Troy had been coined in the month of June, 1537, but the account unfortunately does not disclose the weights or the denominations or the standard of fineness. This commission to the master-workers is not extant, nor have

its provisions been enrolled, yet I regard it as sufficiently establishing the date on which the first Irish coinage was ordered, more especially as the next two accounts repeat the main facts in almost identical words. (Declared accts. Audit office 1595 /1, 2 and 3, and Exch. acct. 302/20.) In January, 1539-40, 937 lbs. Troy of Irish silver were coined, and during the twelve months from Michaelmas, 1540, to Michaelmas, 1541, 1,830 lbs. Troy; both accounts being in pursuance of the commission previously mentioned.

The decision to inaugurate a separate currency for Ireland is soon reflected in the correspondence and minutes which passed between the Lord-Deputy in Dublin and the Privy Council in England. I will choose, from several allusions, one contained in an account prepared by William Brabazon, the Irish treasurer for the army, in October, 1536. Among the receipts is this item: "Also the said accountant is charged of £1382 11. 0. advanced in gain upon the new coin of the harp in the sum of £11405 18. 0. sterling." (*Letters and Papers*, vol. xi, no. 934.)

This extract gives a colloquial name to the coin, and shows that the harp-groat and its half immediately yielded a substantial profit to the King. It is clear that the money of which Brabazon speaks must have been struck before the date of the earliest of the Exchequer accounts which I have cited. As a matter of fact, the mint account for the year 1536, which would presumably include the first instalment of work done by virtue of the commission of 6 March, 1535-6, is not to be found at the Public Record Office.

There is evidence that for some years before 1535 the English groat had circulated as sixpence in Ireland,

but this difference in rating appears to have been a matter of usage only, and not the result of a statute or a proclamation.

Brabazon also writes a memorandum, undated, but referable to 1536, in which he says that the King is at great charges because he pays the army in Ireland after the rate of sterling, and that in the western parts no other coin but sterling is current. He then suggests that an Act of Parliament should order all money there current to be sterling and that coin of the print of the harp should alone be current. A mint might be kept there, to draw in the Irish coin and make it of the said print and value. He had disbursed about £1,500 Irish to the soldiers, which was in sterling but £1,000; therefore if the coin had been of the print of the harp and current after the same rate it would have saved £500. (*Letters and Papers*, vol. xi, no. 521.)

Fortunately the type of the new Irish money was sufficiently distinctive to enable us to identify it by means of Brabazon's phrase in October, 1536. The obverse bears a crowned shield with the arms of England quarterly, and the reverse a crowned harp between certain initials which were varied according to the year in which the coins were issued. These groats and half-groats are more particularly described in the *Handbook*, pp. 227-8, nos. 50 to 52 inclusive [Pl. IX. 1, 2, 3].

I have said that it was rather important to determine the year of the first coinage. If this can be done, it is more easy to interpret the initials of the King and three of his consorts (H I, H A, and H K) which occur on the groats and half-groats. We have two fixed

points which help us towards an explanation. The first is the letter I, which can refer only to Jane Seymour, who was married to the King in May or June, 1536, and died on 24 October, 1537. Consequently all H I coins should be placed within these two dates. The second fixed point is that no coins with the title "King of Ireland" bear the initials of any of the Queens; this rules out Katherine Parr, who was not married to Henry until the year following his assumption of that title in January, 1541-2. The King's marriage with Katherine of Aragon was declared void in May, 1533; therefore the initial K cannot refer to her, if I am correct in believing that the earliest order for an Irish currency was dated 6 March, 1535-6. Thus, by a process of exclusion, we must, I think, attribute the K to Katherine Howard, who was Queen-consort from 8 August, 1540, until 13 Feb., 1541-2.

Then, as to the initial A, which may possibly relate to Anne Boleyn, who was beheaded on 19 May, 1536. This would allow a period of about eight weeks during which the initial would be appropriate, viz. from the date of the order to the mint until the day of the Queen's execution; but it seems improbable that Anne Boleyn was so honoured, for her star was waning rapidly during the last few months of her life. I would therefore assign the A to Anne of Cleves, who became Queen on 6 January, 1539-40.

The chronological sequence of the respective initials would then be I, A, K, the order preferred by Dr. Aquilla Smith in his classification, instead of the generally accepted sequence K, I, A in the *Handbook* and elsewhere. It is noteworthy that only one mint-mark,

the crown, is found on groats and half-groats which bear the initials of the three Queens. The smaller denomination does not occur without I or A or K on the reverse, and it must have been struck in very limited quantities, as these half-groats are among the rarest of the Tudor series of Irish coins. (Cp. *Handbook*, p. 228, no. 52.)

An interesting question arises as to whether the English gold crowns and half-crowns, and the George noble and its half, bearing I, A, or K should necessarily conform to the sequence which I have suggested for the Irish silver, but the point is outside my present subject. With regard to the initials H R, I presume that they denote the periods when Henry VIII was without a consort; for example, the King was a widower for more than two years after the death of Queen Jane in October, 1537.

Before leaving the first coinage I will state the results of an assay of two groats, which tend to show that the prescribed standard of fineness was about 10 oz. in the pound Troy, the contemporary standard of the English silver moneys being 11 oz. 2 dwt. fine.

Irish groat, "Dominus"—H I—mint-mark Crown, 10 oz. 2 dwt. 6 grs. fine silver in the pound Troy. A similar groat, with H A, proved to be 10 oz. 4 dwt. 0 grs. fine. I have noticed that the quality of the silver coins in the sixteenth century is often slightly better than the respective standards; on the other hand the weights of the pieces generally exhibit a deficiency. The weight of the first-issue groats when in fine condition averages about 38½ grs. each, and the half-groats in proportion.

Apparently the Irish currency was not included in

any of the trials of the pyx at the Star Chamber during this reign.

THE SECOND COINAGE, 1540.

In this year another commission was directed to the officers at the Tower mint. Dr. Aquilla Smith sets out the terms of the order and tells us (*op. cit.*, pp. 167-8) that they had been communicated to him. Unhappily, the extract is incomplete and inaccurate, according to my reading of the original text, and it will therefore be desirable again to quote its provisions :

Commission to Rauf Rowlett and Martin Bowes, masters of the Tower mint, and others, dated 13 July, 32 Henry VIII (1540).

The King resolved to cause to be newly made certain moneys of silver to be current within his Dominion of Ireland and not elsewhere, at certain values and rates, having the arms of his realm and a scripture about the same, as by him appointed, on the one side, and the arms of the Dominion of Ireland, namely a harp crowned, and a scripture about the same, on the other side. And the same money to be of a standard lately devised, namely 9 oz. fine silver and 3 oz. alloy in the pound Troy, that is to say, of an alloy of 40 dwt. worse in the pound Troy than is the sterling money of England made according to the indentures of 6 April in the 24th year (1533). And the said money shall "keep in number" 144 in the pound weight, which shall be current in Ireland and be called sixpence Irish ; and also the "demy pieces" of the same, which shall be there current and be called threepence Irish, and shall keep in number 288 in the pound weight, of like print and fineness, which corresponds in weight and fineness with divers old coins then current in Ireland. The remedy was to be 2 dwt. in the pound. The masters were to take up for charges 2s. in each pound weight. (Patent Roll, 32 Henry VIII, part 4, m. 11.)

I observe that there are no stipulations for the use of a privy mark or for a trial of the pyx. Evidently the primary object of this commission was to reduce the

quality of the metal to 9 oz. fine, the first standard for Ireland having been 10 oz. fine, or thereabouts, in the pound Troy, as was demonstrated by the assay above mentioned. The type of the coins was not to be altered, for the words of the order would equally well describe the first issue of 1535-6.

Perhaps the most noticeable feature is the omission of the phrase harp-groat, or groat (*pace* Dr. Smith). The coins were to be known as "sixpence Irish" and "threepence Irish", thus introducing another system of nomenclature which gives rise to some confusion at a later date. At all events, the moneys ordered in 1540 were in reality groats and half-groats, as is shown by their weights, 40 grs. and 20 grs. respectively, and this is, I believe, the solitary occasion on which the difference in rating for Irish purposes is officially recognized in a mint document of the period. The "demy piece", or half-groat, is at present unknown.

On 30 October, 1540, the Privy Council send instructions to Rowlett and Martin Bowes to coin £2,000 in "harpe groats", and it then became the practice of the Council to give specific directions to the master-workers whenever it was desired to add to the Irish currency. This procedure was not adopted in connexion with the English series. An example of these warrants will be presently cited, but in none of them do the Council instruct the mint to provide half-groats.

Having established a coinage of an appreciably lower intrinsic value, the King naturally wished to exclude it from England. This was effected by means of a proclamation dated 19 November, 1540, which forbade the transportation out of Ireland of groats and half-groats bearing the print of the harp on one side, under

pain of forfeiture, fine, or imprisonment, if such were brought to or uttered in England and Wales.

In the summer of 1541 Henry was proclaimed in Dublin as King of Ireland, and on 23 January, 1541-2, the change of style from *Dominus* to *Rex* was announced in England by a second proclamation which has not hitherto been noted in our text-books. The King's English subjects were warned that neglect to use the new style would not be punished if it occurred before 30 April then next; after that day instruments written with the old style would be invalid. On 14 April, 1542, Henry orders the Lord-Deputy to alter the seals in Ireland. Consequently I assume that the word *Rex* was inserted in the dies for the harp-groats very shortly after January, 1541-2, if not earlier. I do not regard this change as constituting a new issue (cp. *Handbook*, no. 53), but merely as a variation of the 'scripture' ordained by the commission, which otherwise remained in force.

I have tried to identify, by means of assaying, a groat which could be safely given to the second coinage, when the standard was 9 oz. fine. The result was perplexing, as will be seen. A double assay of a groat reading *Rex* and *H R*, with mint-mark *Rose*, yielded an average of 10 oz. 3 dwt. 0 grs. fine silver in the pound Troy [Pl. IX. 4]. As the coin was struck after January, 1541-2, it should have been, at least approximately, of the 9 oz. standard then in use, but it was actually better than the (presumed) 10 oz. standard of the first coinage. Thinking that this might be an abnormal specimen, I asked Messrs. Johnson, Matthey, & Co., to make a double assay of another groat of identical type and mint-mark. Their report was "average 10 oz. 11 dwt. 12 grs.

fine"; in each case the "average" was due to the fact that two portions of the same coin yielded different degrees of fineness!¹ Consequently I abandoned any further attempt at elucidation by this method, as the compound of silver and alloy had not been efficiently mixed. Nevertheless, I think that the groat of the type and mark last described, i. e. the Rose, should be regarded as a product of the second issue. It is just possible that work under the order of March, 1535-6, was continued, for some unexplained reason, after the date of the second commission in July, 1540, because there was a similar instance of overlapping in the English series in 1542, when the accounts show that silver money was struck under the terms of the second English indenture during twelve months or more after the date of the third order.

By permission of the Society of Antiquaries I was enabled to exhibit to this Society an original warrant which is preserved among the manuscripts in their library. The document was signed by twelve Privy Councillors on 25 January, 1541-2, the King's signature being affixed by a stamp. The body of the warrant is written in a "secretary hand" of the period, and its contents are here transcribed in full, as it is in all probability the sole survivor of such instructions:

By the King. Trusty and well biloved we grete yo^u well
signifieng unto yo^u our pleass^t & comādemēt is that of the
twoo thowsande pounds sterling for the wch we have ad-
dressed our warraunt to the Treasouro^r and Chamberlaynes
of o^r Esthequyer to be by them or their assignes delyvered
to your hands ye in as convenyent tyme as maye be doo
converte to our use the sayd some of two thowsande pounds

¹ These results have been practically confirmed by another competent assayer.

st into grotes printed into money called harpes lately by us and our counsail devised for our realme of Irland. Deducteng of the sayd two thowsande pounds st for your costs and charges as is lymited unto yoⁿ by our comission appoincted and to yoⁿ directed for the same And thes o^r lres shalbe unto yoⁿ and either of yoⁿ a sufficient warraunt and discharge in this behalf. Yeven undre our signet at our palayce of Westm. the xxvth daye of January the xxxiiijth yere of our Regn.

To our trusty and wellbiloved s^rvants S^r Marten Bowes knight and Raf Rowlet maistres of our mynt.

(Society of Antiquaries, MSS. vol. 116.)

The minute of the Council authorizing the issue of the warrant is dated on the previous day, 24 January.

There is at this time a reference to Martin Pirry, or Pery, who will be much in the foreground of the picture during the reign of Edward VI. On 26 January, 1541-2, Sir William Paget writes to Henry VIII from Paris concerning Pery, who had fled from England on an accusation of either false clipping or false coining, and was then living at Rouen. Paget was doubtful whether the fugitive was included in the Pardon Act of the last Parliament, and asked for the King's directions as to Pery's further employment (*Letters and Papers*). It will shortly become evident that Pery was restored to favour.

THE THIRD COINAGE, 1544.

The proof that there was in this year a new order to govern the making of Irish money is solely based upon an account furnished by Sir Martin Bowes, whose office was now that of an under-treasurer at the Tower. The title of the document recites that Martin Bowes, Stephen Vaughan, and others had been directed by a commission of 14 May, 36 Henry VIII

(1544), to strike harp-groats, to be current within the realm of Ireland, of the standard of 8 oz. fine silver and 4 oz. alloy in the pound Troy. (The half-groat is not mentioned.) Of these groats Bowes had made 2,780 lbs. Troy in the month of May, 1544, on which the King's clear gain was 15s. 3½d. in each pound weight. (Exch. Acct. 302/23.)

It would appear that the debasement of the standard of fineness for Ireland conformed, in the main, to the lowering of the quality of the English silver coins, although the changes in the two series were not effected on the same dates. In 1545 both countries used the same standard for a time, but that instance of uniformity was exceptional. Can a groat of the third issue be recognized? I think so, albeit the general type of the preceding coinage was still in vogue. I caused a double assay to be made of a harp-groat reading Rex, and bearing the mint-mark Lys. The report on the coin was 8 oz. 4 dwt. 0 grs. fine silver in the pound, no "average" being necessary in this instance [Pl. IX. 5]. Although the degree of fineness is better than the prescribed standard by 4 dwt. in the pound Troy, the excess is not very remarkable, and it seems proper to assign mint-mark Lys (when undated) to the third coinage. (Cf. *Hand-book*, p. 228, no. 53.)

I have now reached a stage in the history when it will be convenient to refer to a more debatable topic, that is, the Irish coins with the portrait of Henry VIII. The writers who have dealt with this by-path in numismatics, Simon, Lindsay, Aquilla Smith, and, in more recent years, Mr. Grueber, have classified these pieces as belonging to the King whose name they bore. On

the other hand, Sir John Evans, when discussing this question (*op. cit.*, p. 155), called attention to the improbability that Henry's officials would introduce an entirely new type showing a portrait, and then revert to the old type with the crowned harp, which was undoubtedly used for the King's latest Irish coinage. To this I would add that the groat with Henry's portrait bears the legend *Civitas Dublinie*, which must surely mean that the coin was struck within that city, whereas I hope to prove conclusively that a mint was not working anywhere in Ireland during Henry's occupancy of the throne. There is other evidence that the "portrait" coins belong to Edward VI, but I will defer considering it until later in the paper. Suffice it to say now that I propose to transfer the whole of this class (i. e. Dr. Smith's seventh coinage) to various years in Edward's reign.

THE FOURTH COINAGE, 1545.

The *Letters and Papers* again assist me at this point by disclosing that a further debasement of the silver was in contemplation for Ireland in the year 1545. There are three letters written by Sir Thomas Wriothesley (who had formerly held the office of graver at the Tower) to Sir William Paget, the first of which is dated 27 August, 1545. Paget is requested to inform the King that, after speaking with Mr. Cofferer, Mr. Bowes, and Mr. Knight concerning the money for Ireland, "we have resolved if his Majy be so pleased that the standard shall be vi and vi, which before was viij fyne and iiij only of alloy, for the which I shall send the commission to be signed, which must be done

before they begin to work. The sum that may be coined by 15 Sept is 10,000^{li} which will occupy all the three mints [i.e. at the Tower] for that time or near thereabouts." In the second letter, 1 September in the same year, Wriothesley says that there had been discussion concerning the making of new gold crowns for Ireland, but the standard had not then been fixed. In the third communication, dated 2 September, the same writer tells Paget that he is enclosing the indenture for Ireland, and that they were loth to begin until it was signed (vol. 22, no. 231).

This correspondence goes a long way towards justifying a belief that there was a coinage of harp-groats of the 6 oz. standard in this year. I do not, however, find any reference to such pieces in the surviving accounts of the Tower mint, nor is the "indenture" mentioned in the third letter now available. Still, I think we can assign to the fourth coinage a groat of the previous type and also marked with a Lys, but dated "37", thus indicating that it was struck between 22 April, 1545, and the same day in 1546. This groat presents two innovations; it is the earliest instance of a dated coin for Ireland, and it introduces a system of dating by the regnal year (more familiar on manuscripts than on coins) which was not repeated, after Henry's thirty-eighth year, until 1663. The "37" groat is rare, almost as uncommon as the half-groat of the first issue, and therefore the test by an assay has been omitted in this case. It is possible that the insertion of the date and other smaller changes in the dies should be ascribed to Henry Basse, the graver at the Tower, who had been appointed in November, 1544. [Pl. IX. 6.]

Sir John Evans thought that the "37" groat was struck at Bristol Castle (*op. cit.*, p. 145), but I believe that it is unknown with the typical WS mark. The Lys with which it is marked was a Tower symbol, and there is the further difficulty that the thirty-seventh year ended on 21 April, 1546. This allows only three weeks during which such a date could have been used, seeing that the Bristol order was dated 1 April, 1546. Also, the moneyers at Bristol did not actually begin work until 1 May, that is, in the thirty-eighth year. (Vide Account 302/30.) Again, the "37" groat reads "viii", but those of Bristol always "8", in the obverse legend.

THE FIFTH COINAGE, 1546 (BRISTOL).

In this year the striking of Irish coins ceased at the Tower. The reason for the transfer to Bristol of this section of the industry may have been partly geographical, and partly a desire to furnish employment for the new mint.

The Exchequer Account 302/30 recites that by virtue of a commission directed to Sir E. Peckham, Wm. Sharrington, and others, "having relation from the 1st April 37 Henry VIII", harp-groats were to be made in Bristol Castle. Later in the same document it is stated that the standard of fineness was 3 oz. of fine silver in the pound Troy, so proving that the last of Henry's Irish coins were 1 oz. in the pound less fine than the English series of the same year.

The harp-groats made at Bristol follow the earlier type issued at the Tower, and so there was not much scope for the exercise of any creative talent possessed

by Giles Evenet, the graver. This artist produced, however, an excellent Lombardic alphabet, devised the WS mint-mark, and inserted some variations in the legend. The monogram WS is now generally accepted as being the initials of William Sharington, the under-treasurer of the mint at the time of its inception.

The Account already cited, 302/30, records that in August and September, 1546, Sharington struck 3,657 pounds Troy of harp-groats for the realm of Ireland. Without doubt the coins then made are those dated 38 and marked with the initials of the under-treasurer (*Handbook*, p. 229, no. 57) [PL IX. 7]. It may be noted that the document does not use the phrase "sixpence Irish". There also exists a similar groat with the same mark, but undated, which may have been issued subsequently to the period covered by the last-mentioned account, as there is then a chasm in the mint papers extending over twelve months. No Irish currency was struck at Bristol after Thomas Chamberlain assumed control in January, 1548-9, in the place of Sharington dismissed. A fuller narrative of the occurrences at this mint will be found in *Num. Chron.*, 4 S. xi. 346.

One other memorandum in the Irish State Papers deserves notice, inasmuch as it points to a decision to set up a mint in Ireland in the immediate future. Apparently the King had at last been persuaded by the Lord-Deputy that the scheme would be remunerative, and he assents to a proposal that both gold and silver should be struck in that island.

In 1546 (? 24 Sept.) articles concerning a mint and the mines in Ireland were presented to Henry. "For the mint, the King's Majesty to have the profit, with

like establishment of officers as is here; wherein Thomas Agard is thought good to be vice-treasurer and Martin Pirry comptroller, and such other expert men for the rest as will go thither with their good wits. In the conclusion whereof we do consult with the officers of the mint here (i. e. in London) and so shall go through if it stands with the King's Majesty's pleasure. And for this there must be also a prest of one thousand pounds and a special provision that they carry no money plate nor bullion of gold nor silver out of this realm. Their gold to be of our standard and current here."

In the margin is the following note:

"The King liketh the matter of the mines, and will have it likewise perfected, and the gold and silver to be money here." (S.P. Ireland, Henry VIII, vol. xii, no. 48.)

The same memorandum also expressed the opinion that the profits of the mint and the mines together would defray the main charges then paid by the King, but this forecast proved to be unduly optimistic.

As a matter of fact, the accepted proposal did not materialize during Henry's lifetime. About four months later the King died, leaving to his successor the task of organizing the new venture on the other side of St. George's Channel.

EDWARD VI

became King of England and Ireland on 28 January, 1546-7. For some time after his accession the young King, or his advisers, did not adopt any measures to carry out the project sanctioned by Henry VIII, and when the scheme emerged from the council chamber,

in the second year, the more ambitious portion relative to a gold currency had been omitted; wisely, no doubt, having regard to the economic situation. Nevertheless, Edward began by improving the standard of the silver money, and arranged to give his Irish subjects a coinage equal in fineness and in weight to the latest English issue, viz. 4 oz. fine, with a groat weighing 40 grs.

We shall find that no accounts have survived which deal with the proceedings in Dublin, save only a few stray figures among the correspondence.

Sir John Evans remarks (*op. cit.*, p. 152) that as it is permissible to regard some of the English coins with the portrait of Henry VIII as having been issued by Edward VI, we may extend the same liberty to a consideration of the Irish series. The evidence now available confirms the soundness of this opinion. I shall attempt to show that the whole of Edward's money struck at Dublin before 1552 bore the portrait and name of his father, and, incidentally, to enlarge the compass of the answer which can be given to the question asked by Archdeacon Pownall, who confined his attention to the supposed Irish shillings.

The earliest historical item which I have noted refers to Henry Coldwell, a goldsmith of London, who was afterwards engraver at the Dublin mint. The Privy Council ordered a payment to him of £9 12s. 0d. on 17 April, 1547, for 39½ oz. of silver put into the great seal for Ireland, and £20 for graving and making the same. This graver also produced the great seal for England and other smaller *matrices* of that period.

About thirteen months after the death of Henry VIII the long-desired mint in Dublin was formally consti-

tuted, and I will now quote the material portions of the indenture which furnished the requisite authority to those concerned :

Thomas Agarde, undertreasurer of the mint within the castle of Dublin, Martyn Perry, comptroller and surveyor, and William Williams, general assayer there. covenant with the King to make four manner of moneys of silver, that is to say,

The groat, "running for fourpence of lawful money of England", of which 144 shall weigh one pound Troy.

The half-groat, penny, and halfpenny in like proportions of weight.

The standard to be 4 oz. fine silver and 8 oz. alloy in each pound Troy, and each pound weight of coined silver shall contain 48s. by tale.

A triple indented standard piece to be made, so that the money may be tried once in every year at the least.

5s. 4d. shall be paid in coin for every ounce of sterling silver brought in, and 26s. 8d. in each pound weight of coin shall be taken up for charges.

The privy mark shall be declared to the High Treasurer, and 2s. in every 100 lbs. weight of coin shall be placed in the pyx.

The gravers shall work only in the house within the mint assigned to them by Agard.

Dated 10 February, 2 Edw. VI, 1547-8. (Exch. Accts., 306/3.)

There are extant groats and half-groats bearing Henry's portrait and titles, and reading *Civitas Dublinie* on the reverse, with the mint-mark boar's head. Also, pence and halfpence with another obverse legend and without a mint-mark (cf. *Handbook*, p. 228, nos. 54-6). These coins substantially agree with the denominations ordered by the above indenture, but they do not correspond with any known orders to the mint during Henry's reign, although they have been generally assigned to that period. Sir John Evans conjectured that the privy mark of the boar's head might be a

means of attributing to Agard the pieces so marked, as the family were entitled to use the same symbol as a charge upon their armorial shield. It so happens that this is one of the cases in which the original deed has come down to us, and I found, to my great satisfaction, that Agard when executing the indenture had impressed the wax with a clearly defined representation of a boar's head. Could any one wish for better circumstantial evidence (1) that this group of coins was struck by Agard in 1548, and (2) that Edward used Henry's portrait and titles for the Irish coinage? But there is, alas, a sequel to this discovery. The indenture was in bad condition, and the seal, though quite perfect in itself, was attached by a very fragile tag. The document, with others in the same bundle, was subsequently repaired and mounted on parchment, but when I saw it about a year later the seal was no longer appended. A careful search was made at the Record Office, but, at present, without success.

An assay has been made of a Dublin groat marked with a boar's head, the report on which was "4 oz. 0dwt. 0grs. fine silver in the pound Troy". This result tallies exactly with the standard prescribed in Agard's agreement, and is therefore to be welcomed as another link in the chain [PL. IX. 8].

On 17 March, 1547-8, the Council directed a payment of £11 to the assay-master in Ireland, who was to be sent thither with sundry workmen for "aredyng the thinges against the erection of the mynt". We may assume that shortly afterwards the operations began.

The names given to the coins struck by Agard seem to render it expedient that we should adopt a uniform

system of nomenclature in order to avoid confusion when speaking of the Irish currency of Henry and Edward. In Dr. Smith's paper, and in the *Handbook*, coins of the same nominal weight and of the same value as a medium of exchange are sometimes described as groats and sometimes as sixpences, and the names of the smaller denominations are similarly varied. (The term "sixpence" was due, of course, to the enhancement of the English valuation of a groat by 50 per cent. in Ireland.) I venture to suggest that we should adopt the nominal weight of an Irish coin of the Tudor period as a basis for naming it. Thus, for example, a piece of 40 grs. would be known as a groat, irrespective of any local value placed upon it, and a piece of 10 grs. would be called a penny, not three-halfpence. In the English series we do not cease to describe a silver coin of 80 grs. as a shilling because it was rated at ninepence or less.

To resume the story. The State Papers for Ireland contain a letter from Agard to the Lord-Deputy on 23 September, 1548, in which the under-treasurer says that he is sending twelve pence and as much in halfpence of the first coined of that sort. On 22 November in the same year the Lord-Deputy writes to the Protector Somerset a letter reviling Agard, from which it appears that £5,000 had then been struck in Dublin Castle. Although we have these proofs that the staff had not been idle, it is at the same time evident that all was not well in the mint, even within twelve months of the birth of the undertaking. The Privy Council deemed it necessary to send a significant minute to the Irish government on 6 January, 1548-9, to this effect. For the better furniture of the mint,

the Council required the Lord-Deputy to deliver 1,000 oz. of plate of crosses and such like, then remaining in the hands of the Dean of St. Patrick, to the officer of the mint there, to be used by him as he should think best for His Majesty's benefit. A postscript adds that as the finers and moneyers have been discharged, and as there is no bullion, it shall be considered how the mint may be continued to the King's profit. If that cannot be done, the treasurer is to render an account from the beginning, and cause them to coin out the remaining bullion and then cease. The men were to be discharged, and all things belonging to the mint were to be put in safe keeping. Following this drastic order comes a lament from Coldwell on 1 March, 1548-9, that he has no irons to sink in his office and he asks for payment of his £30.

I am unable to fix even an approximate date for the closing of the Dublin establishment, but it was within the year 1549. Meanwhile the under-treasurer had died, as Francis, the son of Thomas Agard deceased, paid to Sir E. Peckham in April and July, 1550, the sum of £2,368 for arrears of profit due to the King. (Pipe Office Acct. 2077.)

THE SECOND COINAGE, 1550.

For at least six months, and possibly for a longer time, Dublin ceased to coin money for the Irish people, and there is no suggestion that any was obtained from the Tower.

On 27 June, 1550, the Privy Council resolved to erect a mint, and their records of 8 July contain the terms on which the reopening was to be carried out:

1. That a mint in Ireland be set up again, and let to farm for twelve months.

2. The King shall pay no charges, and shall have 13s. 4d. clear on every pound weight coined there.

3. No bullion to be obtained from England or Ireland, but only from other countries.

4. At least £24,000 to be advanced to the King within the twelve months by these means.

5. An assay-master and comptroller to be appointed by the King, and paid by the farmer.

These resolutions make plain the financial straits to which the government was reduced. The King surrenders his royal privilege to issue money for his subjects, in return for a cash payment by a *concessionnaire*, and it will presently be seen that this was not the only occasion on which Edward entered into an extraordinary contract with regard to Ireland and its mint.

A new indenture was executed by Martin Pirry, who took Agard's place as head of the mint, the other two officials retaining their former positions. The document is dated 9 August, 4 Edw. VI (1550), and contains a covenant to strike four silver coins identical in all respects with those ordered on 10 February, 1547-8. The five resolutions of the Council which I have already cited are incorporated in the terms, and the period for which the mint was let to farm began at Michaelmas, 1550, until the same date in 1551. (Cotton MSS. Otho E. x. i. 186.)

The Cotton MS. is only a copy, and it bears an indorsement that "the originall was canceled". Its provisions were not enrolled. A subsequent letter from Pirry to the Privy Council makes it clear that

he began work under this indenture in October, 1550, and that the cancellation was not effected until after May, 1551.

I feel no doubt that the coins which can be attributed to the King's bargain with Martin Pirry are of the same general type as Agard's productions, i.e. with Henry's portrait, but with other mint-marks. We have groats and half-groats marked with P, and the same denominations marked with a harp, but the pence and halfpence (if struck in 1550-1) do not exhibit a privy symbol, and therefore cannot be differentiated from those of the earlier issue [Pl. IX. 11]. The three-quarter portrait on some pence may separate them from those with a full-faced bust. The portrait on the groats marked with a P and the harp is *Evans*, no. 5 (*op. cit.*, pl. VI), as on the English groat with the *redde cuique* legend; in this respect the two Irish groats of 1550 differ from Agard's coinage, which exhibits a portrait akin to *Evans*, no. 2, but without the round clasp. The forks of the cross contain a half-rose, and sometimes an object with three points or branches which may be intended for a lys.

I would assign both the P and the harp marks to Pirry's coinage, and it seems not improbable that the device was changed (after a pyx trial) at the end of January, 1550-1. On that date the sums due to the King as poundage are added up, and a new reckoning is begun in February, without any apparent reason for the break in the account [Pl. IX. 9, 10].

I have caused the two groats of this coinage to be assayed, and the report was as follows:

Mint-mark P, half-rose in forks of cross, 4 oz. 4 dwt. 12 grs. fine.

Mint-mark harp, half-rose in forks of cross, 4 oz. 11 dwt. 0 gr. fine.

Both coins exceed the 4 oz. standard of fineness, the latter groat more especially.

On 13 January, 1550-1, the Privy Council forbid Pirry to deliver any coins from the mint except under their warrant, and they tell him to prepare as much money as he can, in order to serve the King with all diligence. This admonition suggests anxiety as to the payment by the farmer of the stipulated sum (£24,000, as a minimum) within the twelve months, it being well known that Pirry had great difficulty in procuring bullion from foreign countries. And, moreover, he had to pay the 13s. 4d. per lb. in "lawful money of England", not of Ireland. On 21 February, 1550-1, Pirry writes to the Council, perhaps in reply to their last-quoted letter, saying that when he reached Holyhead on his return to Ireland he noticed some questionable vessels in the channel. Accordingly he bought a pinnace of 25 tons, rowed with 16 oars, and put therein 21 tall men well appointed with artillery and ordnance, and so made the passage in safety with his valuables. (This personal incident shows that the business was by no means free from risks.) He goes on to say that he trusts to be able to perform the covenants with the King, and with an overplus, notwithstanding the charge for transporting bullion and money (S. P. Ireland, Edw. VI, vol. 3). A few months later, Dr. Robert Recorde, who had been formerly engaged at the mints in Durham House and Bristol, was appointed as inspector-general of Pirry's operations, with which the Council were still dissatisfied. Letters patent of 27 May, 1551, grant to Recorde the office

of surveyor of all the newly found mines of metal in Ireland, relying upon his expert knowledge of metals. And for the further perfection of the lately erected mint, and for the due observance of the standard, he is appointed surveyor of the said mint, so that thenceforth "the counsell and advertisment" of the surveyor should be used in all assays, meltings, and other works. (Patent roll, 5 Edw. VI, part 4.)

The subject of the silver mines at Clonmines, co. Wexford, is much debated in the State Papers and other correspondence, but, as Archdeacon Pownall has made several extracts therefrom, I will be content with a passing mention of what is, after all, rather a side-issue, as very little of the bullion came from that source. In, or soon after, May, 1551, the three mint officers drew up a report as to the amount due to the King. The account, although it is not so stated, must refer to the bargain made by the indenture of 9 August, 1550. The figures from October, 1550, to January, 1550-1, inclusive, show £7,273 due from Pirry; from February to May, 1551, inclusive, they show £5,372 payable by Pirry. The total due to the King being £12,645, for a period of eight months working in the mint. It seems therefore improbable that the remainder, nearly one half, of the agreed minimum sum would be forthcoming during the last four months of the lease (S. P. Ireland, Edw. VI, vol. 3). Be that as it may, the Dublin establishment was closed either immediately after the preparation of this account or in the month of July next following, the second suppression within three years.

There is again much interesting correspondence with the Lord-Deputy as to the Irish currency, but

the questions raised are perhaps more economic than numismatic, and may consequently be omitted from this survey.

On 8 July, 1551, the English (profile) shilling was cried down to ninepence, and the groat to threepence. By analogy with other proclamations, I think that the reduction in values was not extended to Ireland.

On 17 July, 1551, Sir E. Peckham was instructed by the Privy Council to stay all His Majesty's mints from striking more moneys, after receiving into his hands all the coin and bullion. This interdict would doubtless apply to Dublin, if the mint there had not been closed at the end of May.

Archdeacon Pownall suggests (*op. cit.*, pp. 58-64) that certain profile shillings of Edward VI bearing the mint-marks lion, rose, harp, and lys, respectively, may have been struck in Dublin, or alternatively, in England for the special purpose of being circulated in Ireland. He also surmised that the city of York might be the place of origin of the coin marked with a lion, but it is quite manifest from the accounts that York, alone among the English mints, did not strike pieces of this denomination at any time during the reign. I regard the shillings marked with the lion, rose, and lys as products of the Tower mints and possibly of Southwark, and as belonging to the English currency. Moreover, the three marks seem to be English rather than Irish in nature and meaning. It must be remembered that some of the coins bearing these symbols are dated 1550, in which year the Dublin mint was working for eight months and could have struck shillings for Ireland if they had been required. I also believe that those dated 1551 formed part of the 20,000 pounds weight

of silver of the 3 oz. standard which is mentioned in the *King's Journal* (ed. 1680) on 10 April, 30 May, and 18 June, 1551, and in a mint commission to Sir Edmund Peckham of the same year.

It is conceivable that the Archdeacon's opinion was influenced in favour of the Irish theory by two orders of the Privy Council on 10 August, 1551, when a warrant was sent to Sir J. Yorke to deliver to Peckham £16,000 of the "new coinage in shillings" (i. e. of 3 oz. fine), after 12*d.* the shilling: a second warrant authorized Peckham to transport the same to Ireland, for the King's payments there. The Council by this manœuvre paid the creditors in Ireland with a coin rated as 12*d.*, which coin had been reduced to 9*d.* in England during the preceding month and was within a week to be further cried down to 6*d.* To my mind, these tactics do not show that the shillings were primarily intended for Ireland, but rather that the Council seized the opportunity to relieve themselves of a parcel of depreciated English currency, with a considerable gain to the Exchequer.

There remains the fourth variety of shilling, marked with a harp; this stands in a different category, and I shall have occasion to refer to it presently in another connexion. Meanwhile I will express the view that this shilling, when dated 1551, may be apocryphal. It appears to exist only in Ruding's plate (Suppl. iv. 30), where it is drawn as a coin with the legends partly defaced. I feel little doubt that the last numeral of MDLII was illegible, and that the illustration represents a shilling dated 1552. Perhaps this comment will elicit an undoubted example of the year 1551.

On 17 August, 1551, a proclamation again reduced

the current values of the English silver coins. The shilling was thenceforth to be rated as 6*d.* in the realm of England and the marches of Calais, and all the smaller pieces in a similar proportion.

Three months later it becomes apparent that the spirit of reform which was moving towards a finer coinage in England was also stirring in relation to the Irish currency. The King writes to the Lord-Deputy on 26 November, 1551, to the following effect:—It had been desired that the money should be of like value to that in England, and the Council had devised a plan whereby it should be amended and brought to a greater fineness than ever before. Whereas the moneys there were wont to be one-third part coarser than here, they should not differ so much; that when England had two standards, the one of xi oz. fine, the other more base for pence, halfpence, and farthings, then the fine moneys in Ireland should be ix oz. fine and the small moneys 3 oz. fine. Although the accustomed profit would be lacking, yet it would be for the commonweal of the country, as would be understood from Martyn Pyrrye on his return from London (S. P. Ireland, Edw. VI, vol. 3). This promise of better things was not translated into action, but the same scheme was again introduced some six months later.

Although no Dublin mint accounts are known, the increment obtained from that source is included in some figures prepared by Wm. Brabazon, the treasurer for Ireland, in September, 1551. In 3 Edw. VI the profits of the mint were £4,215; in 4 Edw. VI £900; and in 5 Edw. VI £12,373. The last item is less by £300 than Pirry's own return, which has been already quoted.

In January, 1551-2, Recorde was sent to London to express in person the Lord-Deputy's ideas as to the reformation of the coinage, and he took with him a report by the assay-master on the fineness of a number of Irish coins struck by earlier kings. There is an interesting list of assays vouched by Wm. Williams, but the details and the necessary explanations would be too long for inclusion in this paper. The Lord-Deputy was then in a despairing frame of mind, and remarked that "yt ys come to the shoote anker". (S. P. Ireland, Edw. VI, vol. 4.)

THE THIRD COINAGE, 1552.

The activities of the mint in Dublin were suspended, as we have seen, in May or July, 1551, and the moneyers were not again employed until the end of June, 1552. Before I describe the third and last issue, the circumstances which led up to the re-opening of the mint should be briefly stated. There had been a desire that the respective currencies of the two islands should be equal in value, and the *King's Journal* gives the first hint as to the method of effecting it. On 18 May, 1552, Edward writes in his diary that "it was appointed mony should be cried down in Ireland, after a pay which was of mony at Midsummer next; in the mean season the thing to be kept secret and close". A second entry by the King on 10 June, 1552, says that "whereas it was agreed that there should be a pay now made to Ireland of £5000 and then the mony to be cried down, it was appointed that 3000 weight which I had in the Tower should be carried thither and coined at 3 denar fine;

and that incontinent the coin should be cried down". Let me here remark that the Council apparently showed an astuteness approaching to sharp practice in proposing to make their June payments in Ireland on the basis of a "sixpenny" groat, and then forthwith to reduce the rating of that coin (among others) to twopence, at which sum it was then current in England.

Some doubt is expressed by Ruding as to the meaning of the words "3 denar fine". It seems clear from the context that the use of the word *denarii* was a slip, and that the King meant "3 oz. fine".

On 12 June, 1552, the intention to place the two currencies on the same footing was carried out in these words: "A letter to Lord-Deputy and Council of Ireland for the decrying of the money there to the value it is at in England, the minute of which letter remaineth with the records of the Council." (S. P. Dom. docquet vol.)

The way is now clear to consider the new coinage which followed these preliminary steps, and it will be apparent, I think, that the terms of Edward's agreement with the head of the mint were again extraordinary.

Indenture with Martin Pirry, of London, dated 27 June 6 Edw. VI (1552) and reciting that the King desired to coin a certain mass of bullion within the mint formerly erected in Dublin castle and thereby appointed Martin Pirry, Oliver Daubeney and William Williams to be treasurer or master, comptroller, and assaymaster, respectively. That 1500 pounds Troy of fine silver had been delivered to Pirry on that day to be coined into one manner of money "called pieces of sixpence, running for sixpence of lawful money of England", of such weight that 72 would weigh one pound Troy, and to be of the standard of 3 oz. fine silver and 9 oz. alloy in each pound Troy, and each of such pounds should contain 36^s English, by tale. And that the said 1500^{lbs} of fine silver

was to be coined to the use and behoof of the King. And that whereas Pirry had made suit for an allowance in respect of losses formerly incurred by him in providing and coining bullion within the Irish mint, the King in satisfaction of the petition granted to him that he should coin 1500^{lbs} of fine silver into sixpences as aforesaid, to his own use and without accounting to the King; that he should provide the bullion and pay all costs and charges of coining the same, and that he should not buy fine silver at a price higher than the mint in the Tower was paying at the date of the indenture; that he should make a privy mark on all monies coined to his own use and to the King's use, and should bring from beyond the seas into England so much bullion as he should have taken from England to Ireland to be coined to his own use. (Original deed, S. P. Ireland, Edw. VI, vol. 4.)

Sir John Evans dismisses this contract in three lines, possibly because he had not seen it and so failed to appreciate its significance, while Archdeacon Pownall does not notice it at all, although he might have found therein a clue to the enigma which he was trying to solve. I confess that the contents of the document puzzled me more than a little, on first reading them without any knowledge of the surrounding circumstances, but I believe that the true meaning may be thus interpreted. We should, I think, read the document in the light of two English decrees which are germane to the subject; the earlier one reduced Edward's coins of debased silver to half their original face values, the later edict cried down all the Irish moneys to the current values of the English coinage. That being so, and having regard to the fact that the weight of this Irish "sixpence" corresponds with the weight of the 1550 and 1551 English shillings (72 in the lb. = 80 gr. each), I have no hesitation in identifying the shilling dated 1552, and bearing the mint-mark harp, with Pirry's "six-

pence" of the same year [Pl. IX. 12]. The shilling of 1552 weighs about 76 gr. as a rule, and displays in the legends an alphabet chiefly Lombardic; in this latter respect it differs from the English shillings marked with the lion, rose, and lys, the legends of which are in Roman characters exclusively. In Elizabeth's reign the four coins were treated alike and stamped with the greyhound, denoting that they were then rated at $2\frac{1}{4}d.$ each.

I am happy to be able to corroborate the Arch-deacon's view, expressed thirty-four years ago, that the profile shilling with mint-mark harp was an Irish production, and the more so because I cannot also follow him in thinking that the three other shillings were struck for circulation in Ireland.

We have a considerable number of pieces resembling in type the Irish shilling of 1552, some of which are copper and others of an alloy similar to brass. They do not appear to have been even washed with silver, and they are certainly more numerous to-day than the genuine shilling. Possibly they are the continental forgeries mentioned in Edward's proclamations, but it is difficult to understand how they could be mistaken for the shilling of 3 oz. fine silver, base though the latter is; at all events, there is no suggestion in contemporary writings that they originated in Dublin.

The Acts of the Privy Council furnish evidence on 24 June, 1552, that Pirry was supplied with the 1500 lb. of bullion and that the Lord-Deputy was urged to assist the mint in hastening and increasing the output. Whether Pirry coined any of the so-called sixpences for himself as well as for the King is uncertain, as

only one mint-mark is known. I notice, however, that some examples omit E. R. at the sides of the shield; this may or may not be a sign of distinction between the two classes.

On 15 November, 1552, the Council ordered payment of two and a half years' wages, due at Michaelmas then last, to be made to Henry Coldwell, "late graver," and on 24 November a letter was sent to Oliver Daubeney telling him to retain £1,200 of the money accruing to the executors of Martin Pirry. This is the first intimation of the under-treasurer's death. Apparently the mint ceased working until 27 December, 1552, when a signet bill authorized the surviving officers to coin £8,000, notwithstanding a restraint previously sent to the Lord-Deputy. (Hatfield MSS., vol. i, p. 106.)

I have now shown that the third, and last, issue consisted of one denomination, the solitary Irish coin of Edward's reign which bore his own name and titles.

It will be remembered that the King, in a letter of 26 November, 1551, promised to amend the quality of the moneys circulating in Ireland. An endeavour to redeem this pledge was made in the following May by a request for a certificate of the proportions, &c., requisite for silver of the standard of 9 oz. fine, as had been used (in England) in the time of Henry VIII. This resulted in the preparation of a draft commission to Pirry, Daubeney, and Williams, which is to be found in volume 4 of the Irish State Papers of Edward VI. The document is, of course, undated, and has many alterations and corrections. It proposed to order two coinages, (1) of 9 oz. fine silver, consisting of 5*s.*, 2*s.* 6*d.*, 1*s.*, and 6*d.* "lawful money of Ireland", and (2) of 3 oz. fine, in pence, halfpence, and farthings. The officers

were to be empowered to melt down and convert all shillings, groats, half-groats, pence, and halfpence coined before 31 August, 1551. The earlier part of the draft manifestly follows the general lines of the English fine silver coinage which was issued in the winter of 1551 and onwards. Instead of completing this intended commission, the government, as we have seen, merely ordered the debased shilling of June, 1552.

Perhaps it will be appropriate to add the unofficial names by which sundry coins of this period were known in Ireland, together with their relative valuations:

Sixteen "smulkyns", or rose pence of base metal, were said to be equal to an old half-face groat, unclipped. (The *New English Dictionary* says that the word smulkin is obsolete and rare, and quotes its use in 1571, but this is an earlier instance.)

Pieces of Henry VIII and Edward VI which were coined for 12*d.* English went by the name of "black testons".

Groats of the same kings and of like baseness were known as "white groats", and were the equivalent of four smulkyns.

Base pieces coined by Henry VIII were current as "red harpes", and were worth three smulkyns.

There is a detailed inventory, dated 8 February, 1553-4, of the tools, implements, and other effects left in the mint at Dublin Castle after Edward's death. The list was drawn up by the late assay-master, and can be found among the Irish State Papers of the first year of Queen Mary.

The Carew MSS. of the year 1557 (no. 213 in the

printed volume) give some particulars of the mint in Dublin "as set forth by Mr. Thomas Agard". It is stated that the pay of the under-treasurer was 6*s.* 8*d.* the day, the comptroller 5*s.*, and the assay-master 3*s.* 4*d.* Forty workmen each received 8*d.* the day. 25 lb. of fine silver and 75 lb. of copper, at 8*d.* the lb., were melted daily. Apparently these and other details were under the consideration of Philip and Mary at the time of a proposal to reopen the mint in Ireland.

HENRY SYMONDS.

ABSTRACT OF THE CLASSIFICATION PROPOSED IN THE
FOREGOING PAGES.

HENRY VIII.

Obv.: Shield of England, crowned, on a cross fourchée.

Rev.: Harp crowned, between initials of King or of King and Queen.

Legend. In Lombardic characters, continuous from obverse to reverse.

[PL. IX. 1 to 7.]

	<i>Standard of Fineness.</i>	<i>Mint- mark.</i>	<i>Denomina- tion.</i>	<i>Remarks.</i>
1st issue, 1535-6	10 oz. (presumed)	crown	groat and half-groat	<i>Dominus.</i> HI, HA, HK; and HR on groat only.
2nd issue, 1540	9 oz.	rose	groat and half-groat	<i>Rex</i> after Jan., 1541-2. HR
3rd issue, 1544	8 oz.	lys	groat	HR
4th issue, 1545	6 oz.	lys	groat	dated "37". HR
5th issue, 1546	3 oz.	W S	groat	Bristol, dated "38", also undated. HR

EDWARD VI.

Obv.: Three-quarter portrait, and titles, of Henry VIII.

Rev.: Shield of England on a cross fourchée.

Legends. Roman characters. On rev.: *Civitas Dublinie*.

[Pl. IX. 8 to 11.]

	<i>Standard of Fineness.</i>	<i>Mint- mark.</i>	<i>Denomina- tion.</i>	<i>Remarks.</i>
1st issue, 1547-8	4 oz.	boar's head	groat, half- groat, penny, and half- penny	portrait, <i>Evans</i> , no. 2, approximately
2nd issue, 1550	4 oz.	P, and harp	groat, half- groat, penny, and half- penny	portrait, <i>Evans</i> , no. 5

Obv.: Profile portrait and titles of Edward VI.

Rev.: Oval shield garnished. *Timor Domini*, &c.

Legends. Lombardic, chiefly.

3rd issue, 1552	3 oz.	harp	shilling, 80 grs.	dated MDLII
--------------------	-------	------	----------------------	-------------

(Cf. *Evans*, *op. cit.*, Pl. 6, no. 16.)

[Pl. IX. 12.]

VIII.

THE TECHNIQUE OF SIMON VAN DE PASSE.

(SEE PLATES X, XI.)

THE British Museum recently acquired an unusually fine example of the work of Simon van de Passe, which, so far as I know, is unique [Pl. X. 1]. It is a silver plaque, 55 × 43 mm. or 2.2 × 1.79 inches in dimensions, engraved on both sides in the artist's well-known manner. It represents the bust of a man, with pointed beard, three-quarter face turned to r., wearing ruff and doublet. The design is enclosed in a border such as is not, to my knowledge, found on any other medallion by the same hand. On the reverse is a heraldic achievement, apparently as follows: Quarterly of six, three and three: 1. [az.] a chevron ermine between three rams' heads razed; 2. a lion debruised by a fess engrailed; 3. an eagle displayed; 4. vair; 5. [gu.] three bends [arg.]; 6. three thistles; Crest, a thistle. The shading, it is clear, is anything but systematic; and I doubt whether it is intended seriously.

The motto on a scroll below is "*Minervam temperare Musis*". There is no other inscription save the signature, "*Sim: Pafs. fec.*" which is, in a manner somewhat unusual with the artist, written over (or under) the shading of the field, instead of on a clear space.

The identification of the coat of arms seems to present considerable difficulties. I have to thank Lyon

King of Arms, whom I consulted upon the suggestion that the coat was a Scottish one, and also Mr. Van de Put, for their careful inquiries into the matter, negative though the result has been. The plaque came from Ireland, and this has suggested to Col. Croft-Lyons a connexion with the Irish branch of the family of Ram. So far as I have been able to discover, however, all the likely members of that branch about the time when the piece was made were clerics. Mr. E. E. Dorling has also been kind enough to go into the matter, and allows me to quote the gist of his remarks.

"The early Jacobean date of the piece settles one point, at any rate, namely, that the engraved lines on the charges and fields of the heraldry do not represent the modern dot and dash system of tincture-marks. The first coat in the shield therefore is not *Azure* a chevron ermine between three rams' heads razed *argent*; not necessarily, anyhow, although that coat is borne by Ram of Hornchurch in Essex. I am inclined to believe that the coat is *Sable* a chevron ermine between three rams' heads razed *argent* having horns or, the well-known arms of Ramsey of Etonbridge in Kent, of which family was Sir John Ramsey, Lord Mayor of London in 1577.

The second quartering is perhaps for *Argent* a lion *sable* with a fesse engrailed *gules* over all, the arms of Powell of Filworth in Surrey. These are the only colours that I can find which fit these charges; but whether Ramsey quarters Powell I know not.

The third quarter is perhaps for *Or* an eagle *sable*, another Ramsey coat. These arms are on the monument of John Ramsey in St. Olave's, Southwark, dated 1669; but of course the field and the bird may really be of any other colours, and the coat may belong to any one of many other houses of worship and condition.

I find it impossible to identify the two next quarters—*vair* (or *vairy*) and three *bends*—; and the last quartering—three *thistles*—may be (according to the colours) for Peyntwyn of Lambeth, Hawkey, or Romanes.

The thistle crest perhaps belongs to the sixth quartering.

It is not the crest of Ramsey of Etonbridge; and yet the first and third quarters of the shield make me think that the thing has something to do with some Ramsey or other. I suggest that it may have been Robert Ramsey (or Ramsay), a musician of some repute, who flourished between 1609 and 1639. He was Mus. Bac. of Cambridge in 1616, and organist of Trinity College."

In a subsequent communication Mr. Dorling says:

"*Miscellanea Genealogica et Heraldica*, New Series, vol. i, p. 89, proves to my satisfaction that the arms are not those of the Irish Rams. There is mention there of one Stephen Ram of Ramsford, co. Wexford, who bears indeed Azure a chevron ermine between three rams' heads razed argent, but with five other quarters, all totally different from those on the medal."

So much for the heraldry and the person represented. Possibly the publication of this beautiful piece of engraving may lead to identification on the lines suggested by Mr. Dorling.

I propose to take this opportunity of discussing the method by which these plaques were produced.¹

In the *Medallic Illustrations* the plaques by Simon van de Passe, like the silver map of Drake's voyage, are described as being stamped in imitation of engraving. Sir John Evans² was the first to state a theory of the way in which this could be done. He believed that the process was as follows; "First a copper-plate was engraved or etched after the manner of line en-

¹ There are some who, admitting that the plaques were engraved separately, yet think that the counters, which exist in such numbers, were, at least in many cases, struck from dies. I do not propose to examine the question of the counters, especially as Miss Farquhar intends to make a study of them, from the point of view of chronology as well as of technique.

² *Proceedings Num. Soc.*, 1902, pp. 33, 34.

graving, but the required design not being reversed. An impression from this plate was taken on paper with strong printers' ink, and this impression was transferred to the polished surface of a hardened steel die. This face was then etched with acid, so that the parts protected by the ink would be left in low relief, and with the dies thus formed the soft silver plaques and counters were struck."

Two considerations seem fatal to this theory. The first is that it is incredible that lines of such extreme fineness and purity as are characteristic of the work of de Passe could have been produced by this etching process; they would inevitably have been broken or at least made irregular by the varying action of the acid. Secondly, if we examine with a strong glass the bottoms of the sunk lines of the finished plaques, we see that the bottoms are not flat, but of varying depth, and marked with ridges and irregularities; in fact, they are exactly as if they had been engraved. Now if the process suggested by Sir John Evans had been used, the bottoms would be flat, because they would correspond to those portions of the original level surface of the steel die which were left standing, having been protected by the printers' ink, or whatever preparation was used, from the action of the acid.

But could the die have been produced by some other means? One process had suggested itself to Mr. Augustus Ready, whose views on such matters necessarily carry great weight, as well as to others like myself who are not practical metal-workers. Suppose that the artist engraved a flat surface of steel, so that it looked just like one of his finished plaques. Suppose that this was pressed on to a piece of softer

steel, which would thus give us the necessary negative; and suppose that this was hardened and used as a die.

If the plaques are really stamped, I confess that this seems to me the only possible way in which the dies could have been produced. It would account for the exact reproduction, within the sunk portions, of those marks of the engraver's tool which, as I have said, prove that acid was not used.

We may now consider the opposite theory, that each plaque was separately engraved; and here we are fortunate in having a very precise statement of the case by Sir Sidney Colvin, as it appeared to him after a prolonged examination of the question with the help of expert engravers. I may be allowed to say that as a practical metal-engraver Mr. Littlejohn of the British Museum entirely endorses this view. I quote from Sir Sidney Colvin's *Early Engravers and Engraving in England* (1905), p. 103:

The extant repetitions of any given plaque appear identical in every stroke, except in certain instances where a definite change has been made by the introduction of a pearl ornament or the like. This identity has caused some collectors and experts (including so high an authority as Sir John Evans) to suppose that after one original plaque had been engraved in each case, a die was made from it and the remaining examples struck from the die. But it is extremely doubtful whether such a fine network of sharp lozenges and straight and curved ridges as this supposition implies could possibly have been cut, sunk, or bitten into a die by any method then known, and still more whether such die (supposing its existence possible) could have been so tempered and so managed as to strike with the necessary force and evenness on these thin metal plates. Moreover, a minute examination of the lines, in examples of which the black filling has been removed, shows positively that they are engraved lines, all the characteristic cuts of the different kinds of graver appearing quite clearly under the magnifying-glass. Every practical engraver and silversmith to whom

I have submitted the question agrees that the repetitions have been produced not by any form of stamping, but by the every-day method of rubbing a paper impression from a first engraved plaque on to the face of a fresh one, and then following closely with the graver the lines so transferred: and so on again till the requisite number of copies has been turned out. Practically perfect identity between one copy and another is not unattainable in this manner, and there exist certain impressions on thin vellum which look precisely as if they had been used in the operation of transfer. Besides these fine plaques, mostly signed by Simon van de Passe, there exist a great number of sets of small circular silver counters for card playing, often preserved in their original boxes. These were in use throughout the reign of Charles I, and are engraved back and front like the plaques with the likenesses of the reigning King and Queen, busts or full-lengths of earlier sovereigns, coats of arms, &c. They are much coarser in execution than the oval plaques, and seem to have existed in hundreds while the plaques existed in tens. The numbers in which they are found probably gave rise to the idea that both they and the finer plaques must be stamped or struck from a die (whence the name "jettons" sometimes applied to both classes). But no trace of the existence of any such die has been found, as surely must have happened had a die been used. I can hardly doubt that the counters also are in reality graver-work, repeated by the same means as the plaques themselves only more hastily, exactly as crests and other ornaments are repeated on the different pieces of a service of plate to-day. A good apprentice could probably turn out in a day as many as a dozen or a score of such repetitions, each indistinguishable from the last.

I may say here that Sir Sidney's explanation of the method of reproduction seems to me to be the only possibly true one; but there are still sceptics, and some of the arguments on either side may perhaps profitably be considered in greater detail.

I am not sure whether among the possible processes of making such a die Sir Sidney had considered the method of punching from an engraved steel plate which I have described. The process of making dies

with punches had of course been known for more than a century before Passe's time. I do not see why it should not have been employed; though I am inclined to think that Sir Sidney's second doubt, whether the die, once made, could have been successfully tempered and managed, is a very serious objection to the die theory. It would seem that innumerable fine lines—which, we must remember, would be standing up like knife-edges—would tend to crumple up or break away at the first pressure. This matter could, however, easily be tested by a practical die-engraver; though all those whom I have consulted seem so clear about it that they hardly think it necessary to put it to the test. Sir Sidney's objection that the lines in the finished plaque show the characteristic cuts of the graver's tool is met by the method of making the die which I have suggested. Nor is the fact that no dies seem to be extant a serious objection; it is a mere chance if coin or medal dies are preserved. On the other hand, if the counters, not to mention the plaques, were struck, we should expect to find instances of faulty striking. Such counters as those of the Street Cries, for instance, to which Mr. L. A. Lawrence has called my attention, do occasionally show certain flaws which at first sight look as if they were due to faulty striking. On one, for instance, the plain circular border is partially missing, just as constantly happens when a coin is struck a little to one side. There is no reason why an engraver should omit a portion of the border. Nor, as a matter of fact, did he; the disappearance of part of it is due to the counter having been carelessly cut out of the plate with a circular punch. Among the better and earlier class of counters—

and some of them are nearly as fine in workmanship as some of the plaques—it is, to say the least, extremely rare to find defects which suggest faulty striking.

Perhaps the most forcible argument against the die-theory is to be drawn from the seventeenth-century dies that have actually survived; or rather from the punches with which those dies were made, for it must be remembered that the hypothetical dies for the silver plaques would resemble punches, in that they would be in relief, not sunk. One of the most skilful engravers in the history of the medal was John Roettier, who made the Lowestoft medal of 1665 ("Nec Minor in Terris," *Med. Ill.*, I, 504, 142). Now in the British Museum, in addition to the die, are two punches³ for the main design of the reverse of this piece, with its beautiful and extraordinarily delicate design of ships—a veritable Willem Van de Velde in metal. I illustrate on Pl. X. 2 that one of the punches which seems to have been eventually used for the die. Well, on these punches, the artist *has not attempted* to render the fine lines of the shrouds, or anything which would require sharp knife-edges standing up on the punch. He has engraved these subsequently in the actual die, and indeed he has left to that stage all the finest detail, such as the ships suggested in the background.

Conversation with a practical engraver brings home to one a fact which one hardly realizes in looking, for instance, at the monograms engraved on ordinary

³ Also a small punch for the hull and flag on the stern of the second vessel on the left of the medal. Of the two large punches one, on an irregularly shaped piece of metal, seems to have cracked, and to have been replaced by that which is illustrated here.

spoons or forks. The skilled engraver produces at incredible speed, and, it is to be feared, for a not excessive wage, monogram after monogram of almost microscopic similarity.⁴ If the engraving-theory is right—and personally I feel quite convinced that it is—Simon van de Passe's art was only the craft of the ordinary metal engraver carried to its highest power. It may seem almost incredible that any one should have been at the pains to produce by hand copies so minutely resembling each other. What was the point of it? Would not freer reproductions have served the purpose equally well? Well, the craftsman's mind is difficult to fathom. I am inclined to think that when a certain degree of technical dexterity is attained, it is less trouble to the copyist to copy exactly than to let his mind, even half-consciously, exert itself in making variations on the pattern laid down for him. Everything then depends on the exactitude in detail of the transfer from original to copy. I have already mentioned the irregularities in the bottoms of the engraved lines. The shaft of the letter **I**, for instance, may contain one or two ridges, placed irregularly, the letter having been produced by two or three cuts of the graver; and in two specimens of a medal you will find even these minute details corresponding exactly

* In the Department of Coins and Medals in the British Museum are two engravings on silver of the same subject, one copied from the other, by Mr. Littlejohn, who at the time of making them had given up the practice of the art for something like twelve years. The engravings were done to prove how extraordinarily close copies can be made by engraving over a transfer; and though differences are there, it seems clear that a craftsman in good form could make copies in which variations could only be discovered with difficulty.

in their irregularity. I am assured, by those who know, that a good paper impression taken from one of these engraved plaques would show even such minute details, and that they would be transferred to the new plate, and would be followed by the engraver.

At the same time, we should expect to find occasional variations. And we do. Indeed, they are much more common than is generally supposed. The eye accustomed to deal with different states in engravings can discern with ease innumerable variations in the shading lines. But the differences are not confined to the minute features.

It may be worth while—as hitherto we have only had general statements on the question—to give a few specific instances of the more salient variations. We must of course eliminate all doubtful or secondary pieces from the inquiry. There are, for instance, some comparatively free modern copies, and there are old casts. Two such casts—one of which is in the British Museum, the other in a private collection, both being of the plaque of Frederick Ct. Palatine and Elizabeth of Bohemia and their son—are made of a pewter-like metal. There are also old copies, like that of James I, Anne and Prince Charles, in the lid of a silver box in the Victoria and Albert Museum. On the reverse of this, in the escutcheon on the shield of the Queen, in the fourth quarter, the engraver of the lid has misunderstood the charge (a horseman wielding a sword) and given us some kind of rampant beast. But if we compare apparent duplicates of undoubted authenticity, it is possible, with patience, to find on the majority now slight, now considerable differences. The signature on the Kensington Queen Elizabeth is quite

clear; on the British Museum specimen the border line cuts right through the signature. Possibly, however, that is a case of the border line being added subsequently. In the Prince Charles on horseback, distinct differences are perceptible in the hoof of the horse's near hind leg on the specimens in the two Museums. In the Infanta Maria, the final *e* of *Spaine* on the reverse has a much longer tail on one than on the other specimen. With search, one can easily find other tangible differences; but they are often slight, and it is arguable that they are due to retouching, however the pieces were reproduced. Such a case of retouching is clearly apparent on the obverse of the Prince Charles just mentioned, if we compare the British Museum specimen with Mr. Maurice Rosenheim's. The lines defining the columns on the right, and the diamond panes of the window, appear quite different; and close examination shows that on the Museum specimen this portion has been re-engraved. In going over the lines of the window-panes the engraver has here and there gone to one side of the old lines. I confess that, although I think the probabilities are vastly in favour of the theory supported by Sir Sidney Colvin, this fact at first gave me pause. Why did this specimen fail in just this place, and have to be touched up? Why do the old lines, where they remain beside the new ones, look so dull? If the plaques were produced by stamping with a die which had failed just there, or by casting from a faulty impression, one could understand this. But a medal did not seem likely to become worn just in one place, which projected no more than any other. Mr. Littlejohn, however, has pointed out that the place where the original surface became worn and

dulled is just the natural place for the thumb to press on it in taking it up. This explanation must, I think, be accepted.

I have let slip the word "casting". But the surface of these medals—except when we have to do with such pewter casts as I have already mentioned—is so clean and sharp, that it is out of the question to suppose that they were prepared by casting.

I have reserved to the end the most curious example of variation between specimens of undoubted authenticity. This is the bareheaded portrait of James I (PL. XI. 1 and 2).⁵ Comparison between the specimens at Kensington (PL. XI. 2) and in the British Museum (PL. XI. 1) reveals the fact that, of the ermine spots on the King's robe, while some are the same, others are quite differently placed, and the shape of the piece of his left sleeve that is visible beyond the ermine trimming is quite different. There are numerous other less obvious variations, but those mentioned are such as cannot have been produced by retouching after striking. Supposing *A* to have been struck before *B*; then an ermine-spot which is absent in *A* and present in *B* may have been added with the graver in the latter after striking; but a spot which is present in *A* cannot have been taken out of *B* without showing some signs of the surface having been hammered or doctored. (Of course it could have been taken out of the die; that

⁵ I have to thank Mr. H. P. Mitchell for kindly procuring me a photograph of the Kensington specimen. On the plate the plaques are enlarged two diameters. The reproductions are made by collogotype from photographs taken directly from the silver originals. It was formerly supposed that satisfactory reproductions of such engraved work could only be obtained by photographing plaster casts on which the engraved work had been blacked in.

must be admitted.) Apart from points of detail, if we look at the general handling of the work, at the drawing and rendering of light and shade, it is clear that there is a world of difference between the two pieces. Compare for instance the brilliance and sureness of the lines which indicate the hair, or which give the shadow under James's right cheek, in the British Museum example, with the monotony and lack of life of the same parts in the Kensington specimen. The one stands out in relief, the other fades away. In the one the various lines are given their true relative value, in the other the work has all gone to pieces, owing to the failure to maintain these relations. These differences are not such as could possibly have been found in pieces struck from the same die.

The evidence as I have attempted to state it—and I have tried to be fair—may not appear to be conclusive; but I think it will be agreed that the balance is largely in favour of the plaques having been separately engraved; and the same applies to the great majority of the counters, or at any rate to the finer classes of them. As the Drake map was mentioned at the beginning of this paper, I may add that a careful examination of three specimens side by side showed conclusively that there were various small differences only explicable on the assumption that the plates were separately engraved.

G. F. HILL.

IX.

COINS OF THE SHĀHS OF PERSIA.

(Continued from Ser. IV, Vol. XI, p. 196.)

III. ADDENDA.

(a) *Distichs and Legends.*

SOME of the following distichs and legends have not hitherto been published, others appear for the first time in their correct form :

TAHMĀSP I	سلطان کشور دین طهماسب شاه عادل	*
ĤAMZAH ¹	بند شاه ولایت حمزه	*
SHĀH SULTĀN ĤUSAIN	بند فرمان بر مولی حق سلطان حسین	* *
'ABBĀS II	بگیتی انکه اکنون سکه صاحبقرانی زد ز توفیق خدا کلب علی عباس ثانی زد	
MAĤMŪD	دین حقرا سکه بر زر کرد از حکم اله عاقبت محمود با شد پادشاه دین پناه	

* Seal.

¹ Mr. R. S. Poole is mistaken in saying that the date of the deposition of Muhammad Khudābandah must have been immediately before the enthronement of 'Abbās I, at the end of A.H. 995 (late in November, 1587, n.s.). Hanway gives him a reign of eight years, so that he was probably deposed in A.H. 994. Olearius mentions that he died in A.D. 1585 (A.H. 993). Muhammad Khudābandah was succeeded by his eldest son, Sultān Ĥamzah, whom Isma'īl, a younger son, caused to be assassinated. Isma'īl (III) was murdered in Karūbāgh by his barber when 'Abbās the youngest son had already reached that district. Olearius gives both Sultān Ĥamzah and Isma'īl a reign of eight months. I discovered two firmāns of Sultān Ĥamzah; they relate to endowments of the shrine of Kijā in the Kūhdum sub-district of Gīlān. They are dated respectively Ramadhān and Dhikā dah 994, i.e. between August and December, 1586, n.s. In one of them Sultān Ĥamzah styles himself:

السلطان ابن السلطان ابن السلطان حمزه

² 'Abbās I, Šafī I, 'Abbās II, Solaimān I, Shāh Sultān Ĥusain and Tahmāsp II use the same formula.

³ The distichs in chapter I should read : گشت صاحب سکه الخ

- ASHRAF⁴ دست رد بر جلالت بود گناه
داد تغیر سکه اشرف شاه
حور و مه چون طلا و نقره از فیض منور شد
شرف بر آفتاب از نام اشرف سکه بر زر شد
- AHMAD سکه زد بر هفت کشور چتر زر چون مهر و ماه
وارث ملک سلیمان گشت احمد پادشاه
- NĀDIR⁵ نادر عصم ز لطف حق غلام هشت و چار
لا فتحی الا علی لا سیف الا ذو الفقار
ز بعد نادر دوران عدالت سکه بر زر شد
بنام شاه دین سلطان علی عالم منور شد
- بند شاه ولایت علی
- SHĀHRUKH یافت از الطاف احمد پادشاه
شاهرخ بر تخت شاهی تکیه گاه
- SULAIMĀN II زد از لطف حق سکه کامرانی
شد عدل گشته سلیمان ثانی
- LUTF 'ALĪ KHĀN سکه بر زر گشت دین جعفر ز لطف علی
- AḲĀ MUḤAMMAD KHĀN ابوی امری الی الله عبده محمد
- FATH 'ALĪ SHĀH آمده سکه شاهی بر زر از فتح علی
شاه شاهان جهان فتح علی
- 'ABBĀS MĪRZĀ در دریا خسروی عباس

⁴ Hanway gives the following translation of the inscription on Ashraf's seal: "The faithful observer of the commandments of the Most High, the dust of the feet of the four friends, Abubekr, Omar, Osman, and Ali, is Ashraf, by the divine permission become the most illustrious of the sovereigns of the earth."

⁵ We find in Hanway the following translation of the distich first used by Nādir on his seal:

"As the jewel was fallen out of the ring of fame and glory,
So God has restored it in the name of Nādir."

(b) Rare and Unedited Coins.

ISMA'IL I.

1. Astarābād, 9 (x 8).

Obv.—B.M. 2.*Rev.*—السلطان العادل الكامل الهادي الوالي سلطان شاه اسمعيل
بهادر خان الصفوي خلد الله ملكه و سلطانه استراباد

AR 1. Wt. 142.7.

2. Ganjah, date obliterated.

Obv.—Area in square formed by tails of علي in margin :صرب
گنجہ

Margin in segments similar to B.M. 12.

Outer margin لا اله الا الله محمد رسول الله على ولي الله

Rev.—السلطان العادل الكامل الهادي الوالي ابو المظفر شاه اسمعيل
بهادر خان الصفوي خلد الله ملكه و سلطانه

AR 9. Wt. 142.6.

Similar coin struck at Nakhchivan.

3. Nisā', 916.

Obv.—B.M. 13, but date حسن محمد علي*Rev.*—Same as 2, but ends صرب شاه

AR 1. Wt. 71.2.

4. Sabzavār, 927.

B.M. 12 a, but mint and date ۱۲۷ و ابر . Counter mark شاه
سبز عدل صرب
صرب مشهد

AR 1.1. Wt. 143.2.

5. Tīmajān, undated.

Obv.—Area within square, B.M. 13.

Margin, in segments, محمد | علي | حسن | حسين

Rev.—السلطان العادل الكامل الأعظم الوالى ابو المظفر شاه اسمعيل
بهادر خان خلد الله ملكه

Centre within border of five foil تيعجان.

Ar .7. Wt. 24-8.

N.B. Similar coin but سلطان اسمعيل in lieu of شاه اسمعيل.

6. Lahijän, date obliterated.

Obv.—5.

Rev.—السلطان ابو المظفر شاه اسمعيل بهادر خان خلد الله ملكه

Centre within circle لاهيجان

Ar .7. Wt. 26.

7. Karjān, date obliterated.

Obv.—Similar to 5 but arrangement of words differs.

Rev.—
 السلطان^١ لعال^٢
 الوالى ابو المظفر
 الكامل
 ...
 شا^١
 ... اسمعيل ...
 ...

Centre within border of eight foil كرجيان

Ar .85. Wt. 26.

8. Lashtanishāh, date obliterated.

Similar to 7 but *rev.* centre within hexagon لاشتنشا^١

Ar .75. Wt. 30-5.

9. Lahijän, 912.

Obv.—7.

Rev.—
 السلطان^١ لعال^٢
 لى^٣ دى
 الوالى (بهادر)
 لاهيجان
 خلد الله و سلطاناه
 ملكه

In centre within border of four foil شاه اسمعيل

٩١٢

Ar .8. Wt. 26-4.

TAHMĀSP I.

10. Isfahān, date obliterated.

Obv.—Within twelve foil, B.M. 9.

على المرتضى حسن المجتبی حسین الشہید بکریلا علی
 زین العابدین محمد باقر جعفر الصادق موسی الکاظم علی ابن موسی
 الرضا محمد التقی علی النقی حسن العسکری محمد المہدی

Rev.—

السلطان العادل
 الکامل الہادی الوالی المظفر
 سب طہما
 شاہ
 بہا خدا
 خلد تعالی و نہ
 الصفو ملکہ سلطا

In centre within border اسفراہین
ضرب

AR 1-1. Wt. 82.5.

N.B. Similar coins for Nishāpūr, Mashhad (A.H. 935), Tūn
 and Sabzavār (A.H. 935).

11. Tūn, date obliterated.

Obv.—Similar to 10 but margin B.M. 36, in six cartouches,
 names of Imāms grouped in twos.

Rev.—Similar to 10 but تون
ضرب

AR 1. Wt. 83.

N.B. Similar coins for Turbat, Harāt, and Astarābad.

12. Ja'farābād, 979.

Obv.—B.M. 23.*Rev.*—

عليه السلام
 طاب
 غلام علی ابن ابي
 سب
 شا طہما الحسین
 جعفر ابا ۹۷۹
 ضرب

Margin in four compartments

السلطان العادل | ابو المظفر | المفوی خلد | الله ملکہ

AR 85. Wt. 70.6.

NĀṢIR AL-DĪN.

13. Tabriz, 1293.

Obv.—

ناصر الدين شاه غازي

خسرو صاحبقران

Rev.—B.M. 584, but date

خسرو تيريزا

A' 9. Wt. 106.2.

14. Harat, 1277.

Obv.—B.M. 610, but date 1277 below.

Rev.—

هرا

دار النمرة

1277

خسرو

R 7. Wt. 74.9.

N.B. Similar coin but mint دار السلطنة هرات

15. Mint and date unknown.

Obv.—B.M. 602.

Rev.—

5	1	1	2	2
2	1	8	1	8
2	1	2	1	8

The figures in the third line are not very legible.

R 6. Wt. 72.9.

Towards the end of his reign Nāṣir al-Dīn adopted the style of السلطان صاحبقران ناصر الدين شاه قاجار. On a coin struck on the occasion of his jubilee (A.H. 1313) the title is السلطان ذو القرنين ناصر الخ

H. L. RABINO.

(To be continued.)

NOTICE.

Essex Seventeenth Century Tokens. Mr. William Gilbert, of 35, Broad Street Avenue, London, E.C., is publishing a revised work on the above, with notes of the issuers, &c., and enumerating about forty hitherto unpublished pieces. He would be glad to hear from any one possessing Essex tokens (however few) for the comparison of die-varieties, &c.

X.

QUAESTIONES CYRENAICAE.

(Continued from p. 178. SEE PLATES III-VI.)

FOURTH PERIOD.

During the third century Cyrene is, historically speaking, one of the obscurest corners of that obscure age. The main facts apparently are : After the disaster which overtook Ophellas Magas re-occupied the city in Ptolemy's interest, and apparently without bloodshed. He ruled it for the next fifty years. The suzerainty of Egypt was never, we may suppose, very openly asserted inside the walls of what were, in name at least, Greek republics. Time confirmed Magas in his agreeably indefinite position, till with the death of Soter and the increasing friction between Syria and Egypt he declared himself independent and allied himself with Antiochus I, whose daughter he married.¹⁵⁰ Taking the field, he occupied the district of Libya lying between Cyrenaica and the Delta, and threatened Egypt; but he was recalled by domestic troubles, and seems to have undertaken no further active operations. Some years later (probably on the death of Antiochus I) an end was put to this awkward state of armed but inactive hostility by the betrothal of Berenice, daughter

¹⁵⁰ As the princess was born not earlier, possibly later, than 292, the marriage cannot have taken place much earlier than 276-275. Pausanias, i. 7. 3, shows that it cannot have been later than 274, when the Syrian war broke out.

and heiress of Magas, to Ptolemy II's son. In 258, however, Magas died, and his Syrian widow, ill content with the impending union of the Pentapolis with Egypt, summoned from Macedon Demetrius the Handsome (*ὁ καλός*), brother of Antigonus Gonatas, to take both heiress and inheritance.

For the next few years the history lies in the utmost confusion; our authorities when they mention the Cyrenaica only do so to contradict themselves as well as each other, and it is impossible to get a satisfactory account of events. What we know for certain is that Demetrius ended by paying his attentions to Apame in place of Berenice; that he was killed in a palace intrigue at the head of which stood the injured princess, though still a girl; that Berenice eventually married Ptolemy III as had been arranged, and was a bride shortly after her husband's accession in 247-6; lastly, that two Megalopolitans, Ecdemus and Demophanes, were summoned to adjust political differences and reorganize the city, which they did with signal success, an event which must have occurred between 252 and 235.¹⁵¹

It has been generally assumed that Demetrius was murdered in 258, and Niese puts the reorganization by the philosophers about 250, shrewdly pointing out that Ecdemus and Demophanes were pupils of Arce-silaus of Cyrene, who was also the friend of Demetrius

¹⁵¹ After 252, because it occurred after the freeing of Sicily in c. 252, and before 235, because Lydiades then laid down the tyranny of Megalopolis and the city entered the Achaean league; this brought an amnesty for exiles, and Ecdemus and Demophanes must have returned then, for they were the educators of Philopoemen.

himself, and so suggesting that the movement to call them in was the result of a counter revolution against the Egyptian party. This is very attractive, but there are two great objections, (1) the long time that would then have elapsed—nearly ten years—before the counter revolution, and (2) the marriage between Berenice and Ptolemy. If we can put the date of Demetrius' death later, some at least of the difficulties are smoothed out. Our chief authority is Eusebius (who throughout confuses Demetrius ὁ καλός and Demetrius son of Antigonus Gonatas). He says that the Macedonian prince "subdued all Libya and occupied Cyrene, which he held for ten years; adding these to his inheritance he founded a new kind of kingship (*monarchiae novam rationem fundavit*)". True, he is also said to have died in 258. But this latter statement is inconsistent with the activities he is credited with—they cannot have begun before the death of Magas—let alone the "ten years". There seems as much or as little reason to accept the one as the other. It has already been suggested by Niebuhr that Demetrius' death should be placed in 250, and he emends Eusebius' text accordingly.

There are two other relevant fragments of information. Callimachus writes a dedication for the bow of a Cretan, Menoetas of Lyctus:

ὁ Λύκτιος Μενόιτας
τὰ τόξα, ταῦτ' ἐπειπών,
ἔθηκε τῇ κέρας τοι
δίδωμι καὶ φαρέτρην
Σάραπι· τοὺς δ' οἷστον
ἔχουσιν Ἑσπερίται.

This shows that Euesperides (the name is not yet

Berenice) was fighting against Cretans, presumably mercenaries, and from the mention of Sarapis and from the authorship we may safely conclude Egyptian mercenaries. In view of Callimachus' date the fighting must have occurred before c. 240.¹⁵² Solinus,¹⁵³ on the other hand, who speaks of the city as Berenice, says, "*Hanc [civitatem] Berenice munivit quae Ptolemaeo tertio fuit nupta, et in maiori Syrte locavit.*" The change of name doubtless took place at the same time as Teuchira became Arsinoe (a name connected especially with Ptolemy II and III) and the port of Barca Ptolemais. It points to a reorganization of the Cyrenaica. The word *munivit* becomes clear if read in the light of Callimachus' epigram. Berenice did more than change the name of Euesperides; she restored it after the damage of war.

It may be suggested that the outline of events was somewhat as follows: Demetrius ruled several years over Cyrene and Libya as the future husband of Berenice, still a child. His conduct (with Apame and otherwise) gave rise to considerable discontent, and in 252 or later he was murdered by the Egyptian party, at the head of which stood Berenice, aged perhaps fourteen to sixteen.¹⁵⁴ The result of this was an outbreak of civil disturbance, but the anti-Egyptian party seems still to have kept the upper hand. Ecdemus and Demophaues, the pupils of Arcesilaus, Demetrius' master, were summoned to reorganize on a federal basis the affairs of the Cyrenaeans, whose liberty (as Plutarch says) they championed and maintained. In

¹⁵² Call. Ep. xxxvii.

¹⁵³ Solinus, c. 27.

¹⁵⁴ "Tenera virgo," Catullus, *Coma Berenices*.

c. 250 Ptolemy II brought to an end his Syrian wars, and now nothing stood between Cyrene and Egypt. In the following years attention was concentrated on the recovery of the district, which was not achieved without a struggle, as has been hinted above. By the earliest years of Ptolemy III the Pentapolis was finally reorganized and united more closely to the Egyptian kingdom.

Such a view, which would make Berenice about fifteen in 252, explains why she was still a bride after her husband's accession in 247-6. If she were fifteen in 258 why such a gap before her marriage? The notice of Eusebius may be thus explained. From 258 (the death of Magas) to 248 (?) the policy of Cyrene was pro-Macedonian, pro-Syrian, and anti-Egyptian—down to 252 under Demetrius, for the rest of the time under the two philosophers, comrades in arms of Aratus, who gave it some kind of federal system. May not Eusebius or his authorities have mistakenly synchronized Demetrius, the outstanding figure, with the whole period of anti-Egyptian policy, and so given him ten years of rule, as well as the credit of a new system of government (*novam monarchiae rationem*) which really belongs to his successors? It is an easy mistake to call a new form of government (federal or what not) "*novam monarchiae rationem*" when laid to the credit of a prince. From now down to the time of Ptolemy Physcon Cyrene remained united to Egypt. If there were revolts (for example, at the death of Ptolemy III, under Berenice and Magas the younger) they were short, and we have no direct information about them.

The numismatics of this period are almost as troubled as its history; at irregular intervals throughout the

third century regal Ptolemaic as well as autonomous coins were issued from the mints of the Cyrenaica, the monograms being in some cases similar. In the first half of the century Cyrene seems to have been theoretically a free state, and thus to have issued gold as well as silver and copper money. What the relations between the two sets of coins were it is impossible to judge on the scanty evidence; but the sporadic character of the regal currency seems to show that it was not due to any definite diminution of the city's liberties.

The Silver Coinage.

That the issue of Attic didrachms ceased with the fall of Ophellas in 308, I have tried to show above. That the succeeding issue of Rhodian weight was accompanied by a reorganization of the mint, is suggested by the fact that from henceforth magistrates' names cease to be written in full; in their place we find either nothing or symbols and monograms. In the obverse, and still more in the silphium of the reverse, there is a break in style between the majority of the Rhodian didrachms and the coins of the late fourth century, which suggests that few silver coins were issued in the first years after Magas' occupation in 308.¹⁵⁵ The connecting links with the previous period are the Attic didrachm of $\Pi\Omega\Lambda\text{IAN}\Theta\text{EY}\Sigma$ (No. 74 A, above), the style of which anticipates curiously that of some of the later Rhodian didrachms, and the following coins:

¹⁵⁵ See below, p. 287.

84. *Obv.*—Head of young Ammon r., diademed.

Rev.—Silphium (of florid style) with three whorls and seven umbels; $\begin{matrix} K & Y \\ P & A \end{matrix}$

B. M. *R.* 0.75. Wt. 117.4 grs. Rhodian didrachm.

85. *Obv.*—Similar; same die.

Rev.—Silphium as above, but of much stiffer style; in field to l., tripod, and to r., wreath.

Berlin. *R.* 0.8.

The style of the silphium on No. 84 is very close to that on the series of didrachms of Attic weight (Nos. 74-9, especially 79), and this, together with the absence of any name, symbol, or monogram, would lead us to put the coin at the head of the series.

The tripod on the reverse of No. 85 occurs on other didrachms of rather later style, sometimes coupled with the monogram Ξ (M., i. 166-8), a coincidence which might lead us to put these didrachms next in order of time; and the conclusion can be supported by an argument to be drawn later from the gold coinage (see p. 266).

Points of contact are so rare within this group of didrachms that it is perhaps worth while to note the following three coins:

86. *Obv.*—Head of young Ammon l.

Rev.—Silphium with three whorls and five umbels; $\begin{matrix} K & Y & PA \\ tripod & \Xi \end{matrix}$

B. M. *R.* 0.8. Wt. 114.1 grs.

87. *Obv.*—Similar.

Rev.—Similar; in field l., Ξ ; across field KY—PA

B. M. *R.* 0.8. Wt. 120.9 grs. Another, *obv.* same die; *rev.* same monogram and bow-case. Berlin.

88. *Obv.*—Similar.

Rev.—Similar; across field above, KY—PA; below, | ⑀—⑀.

B. M. R. 0.85. Wt. 120.1 grs.

The obverses of these three coins are very close to each other in style and therefore probably in time. No. 86 forms one of the ⑀-tripod group and so probably comes early in the series. No. 88, on the other hand, connects up with a number of other issues, which are therefore in close chronological relation with it. These are (1) "autonomous" Rhodian tetradrachms and didrachms with | ⑀ ⑀ and crab (see below, No. 89 and M. i. 160?); (2) "autonomous" Phoenician didrachms in silver and gold with ⑀ and crab (M. i. 180-1); (3) Ptolemaic (Phoenician) gold didrachms with | ⑀ and | ⑀ ⑀ (Svoronos *Νομίσματα τῶν Πτολεμαίων*, Nos. 102 and 151¹⁵⁶); (4) Ptolemaic copper with | ⑀ ⑀ or Π, crab, and silphium. (Svoronos, *op. cit.*, Nos. 70-1.)

It has not been previously noted that tetradrachms of Rhodian weight were issued as well as didrachms, but the following certainly fall within this period.

89. *Obv.*—Head of bearded Ammon r., hair curling freely.

Rev.—Silphium with three whorls and five umbels; in field above, KY PH; below, | ⑀ ⑀; beneath, in field r., crab.

B. M. R. 1.05. Wt. 222.6 grs. Rhodian tetradrachm. Another, same dies, in the market, wt. 237.4 grs. Others in Jameson Cat., No. 1351 ("vers 400"), wt. 222 grs., and at Berlin.

¹⁵⁶ In the last the monograms are given as three, | ⑀ ⑀ ⑀, but obviously the first two are really one, the double Π is written in full, and the whole stands for a name like ΠΠΠΑΡ[ΧΟΞ].

90. *Obv.*—Similar (different style).

Rev.—Similar; in field r. cornucopiae; below, at base of stem, l. and r. **KY PA**

B. M. *R.* 1-05. Wt. 230.5 grs. Rhodian tetradrachm.

There are didrachms corresponding to both of these—*M. i.* 160 (?) and *i.* 151-2.

No. 89 is interesting for the inscription. It is the only instance of the abandonment of the Doric form of the ethnic. That it should appear at the outset of the Hellenistic age is characteristic of that time. The crab on the reverse raises the whole question of the monograms and symbols of the period. Are these used to distinguish different issues of the same mint, or the issues of one mint from another? It seems impossible to trace any system in their arrangement; sometimes the symbol is accompanied by a monogram, sometimes not; sometimes it is the monogram that stands alone. The crab occurs on coins of all issues of this century, occasionally as a type, *e.g.* on the copper (*M. i.* 340), mostly as a symbol, *e.g.* on Rhodian tetradrachms (No. 89) and didrachms (*M. i.* 175), on Phoenician didrachms (*M. i.* 179-80), on later copper (*M. i.* 247, 267, 280, 283), and on Ptolemaic gold and copper (Svoronos, *op. cit.*, Nos. 304, 70). These coins must cover altogether a space of at least half a century, almost certainly of considerably more. Leaving out of consideration the fact that the symbol appears with different monograms, we cannot therefore refer it to an individual. The most likely explanation is that it has a local significance. The crab points to a seaport.¹⁵⁷

¹⁵⁷ Müller, *i.* p. 95. *Σηλαί*, as he points out, means "mole" as well as "claw".

But all these coins when they bear any ethnic bear that of Cyrene. The port of Cyrene, known in Ptolemaic times as Apollonia, in early Christian times as Sozusa, is the one place which answers all the requirements. First it was a port; second, as it was, so to say, a suburb of Cyrene, we need not be surprised to find **KYPA** on coins issued thence. I would therefore assign all coins on which we find a crab to a subsidiary Cyrenaean mint at Apollonia. Müller goes further and regards all coins bearing Α as issuing from this mint,¹⁵⁶ of which he thinks Sozusa was the pre-Ptolemaic name as it certainly was the late Roman. But there is no reason to suppose that the name of the place was anything but Apollonia until late Roman times, while if we take the monogram for that of a magistrate—the most natural explanation—it falls into line with the other monograms of the series which have never been interpreted as referring to anything but magistrates. Müller's reason for treating it exceptionally is the varying weight of the unit pieces on which it occurs. This seems to him to require a longer period of time than would be covered by the activity of a single magistrate, a point which will be dealt with below, p. 261.

Except for the latest copper issues, No. 119 below, other symbols (save one) though they occur on coins of different groups, *e.g.* the bow-case on No. 87 and on a coin of Berenice II,¹⁵⁷ the snake on a Rhodian didrachm (M. i. 171), and later copper (M. i. 265), must be referred to individuals, as the common ethnic **KYPA** would

¹⁵⁶ Müller, *ibid.*, p. 94, but cp. Suppl. 17, 18.

¹⁵⁷ Svor., No. 319, who calls it a silphium and assigns it to Berenice I.

naturally lead us to suppose. The one exception is the fruit-laden branch which is found on a Rhodian didrachm with the puzzling inscription **BA ΞΙ** (M. i. 364), on Ptolemaic gold staters of Phoenician weight (Svoronos, *op. cit.*, No. 101), and on late bronze (M. i. 339). In none of these cases is the symbol coupled with the ethnic of Cyrene, and in the last we have what is probably the initial of Euesperides, so we may conclude that here, too, we have a clear example of the local significance of a symbol.¹⁶⁰

Of M. i. 364 I have no explanation to offer. **BA ΞΙ** must stand for **BA ΞΙΛΕΩΞ**. The fruit branch seems to imply Euesperides. The coin itself, to judge by the stiff style of the silphium, does not come early in the series of Rhodian didrachms. The head suggests personal traits and has vague Ptolemaic analogies, but to say, as does Müller (*l. c.*), that it is a head of Soter seems too much. The enigmatic inscription would suggest some time of interregnum such as the period between the death of Ptolemy I and the open defection of Magas from his half-brother Philadelphus (283-280?). With this the style of the silphium accords well enough, while the fleshy face agrees with what we know of Magas' appearance.¹⁶¹ At the same time it is doubtful whether Magas actually assumed the royal title. As I shall attempt to show later, the coins reading **BA ΞΙΛΕΩΞ ΜΑΓΑ** cannot be accepted as evidence, and the literary authorities are not unanimous;¹⁶² nor, if they were, would their evidence be conclusive, for they are mostly on a level with Justin who calls even

¹⁶⁰ See below, p. 278.

¹⁶¹ As Cavedoni suggested, M. i. p. 143, and note 4.

¹⁶² Cf. the references collected in Thirge, p. 223, note 9.

Ophellas "rex", though he died before any of the great diadochi had assumed this style. If Magas had called himself king, it seems difficult to believe that during his period of independence, which must have lasted more than fifteen years, he would not have put his name in any form to the coinage.¹⁶³

The silver coinage we are discussing presumably lasted down to the middle of the century and till the death of Demetrius the Handsome. It probably began with Nos. 84-5 above; but the break in style, which is noticeable between the various gold and silver issues as compared with those at the end of the fourth century, and the number of magistrates whose names or initials appear only on the copper,¹⁶⁴ would lead us to infer that for several years after the reconquest by Magas the coinage in the precious metals was very scanty. At any rate we may suppose the introduction of the Rhodian weight standard to be the result of its employment by Ptolemy for his "satrapal" issues and therefore subsequent to 305 B.C.¹⁶⁵ Of M. i. 171-4 with the monograms |^Π and |^Κ KE we may say that they are earlier than 283 B.C., for corresponding monograms occur on coins of Ptolemy I (Svoronos, *op. cit.*, Nos. 65-71). Latest in style seems to come the group with the crab symbol and various monograms (M. i. 161-5).

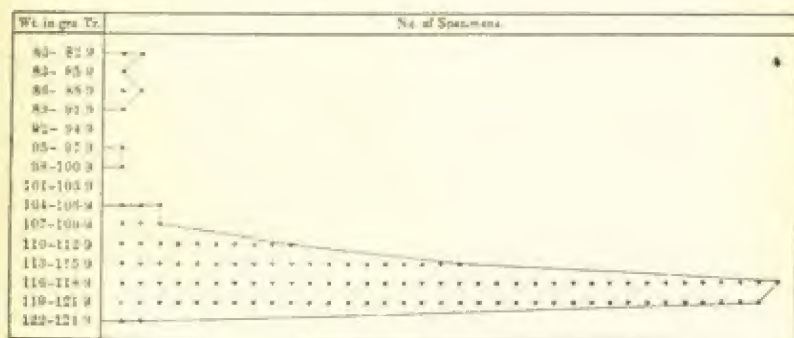
The weights of the silver coins of this period are very confused, as is shown by a glance at the 'table of frequency' prepared for the didrachms with the head of beardless Ammon and the silphium plant as

¹⁶³ For the alleged monogram of Magas see below, p. 288.

¹⁶⁴ See p. 275.

¹⁶⁵ Svoronos, *op. cit.*, Nos. 101-80.

types, from the list of weights in Müller and from those specimens in the British Museum acquired since he wrote. From this table it can be seen at a glance that the normal weight is 116-121.9 grs., and that from 116 grs. the "frequency" decreases rapidly and regularly to 101 grs. Thus, while the number of coins between 116-118.9 and 119-121.9 is almost exactly equal, the number between 113-115.9 is little more than half of that between 116-118.9, the number between 110-112.9



little more than half of that between 113-115.9, the numbers between 104-106.9 and 107-109.9 each a third of that between 110-112.9. Between 92-101 grs. are two coins, but between 80-90 there are no less than six. Müller¹⁶⁰ had already recognized the diversity of weights and the two groups into which they fall, but he failed to notice another group with a different obverse type, the head of Apollo (M. i. 177-80). Specimens of this group are by no means common, but, with one exception, the weights of all that I have been able to record fall between 98-106.9 grs. The exception (M. i.

¹⁶⁰ i. pp. 117 seqq., and 65-7.

179, wt. 114.3) is also distinguished from every other coin of the group by the absence of any monogram.

Undoubtedly at this time the weights of coins were carelessly regulated,¹⁶⁷ and due allowance must be made for under- and over-weight coins if the striking was by tale. But it seems difficult to resist the conclusion that we have here three different units, the lowest and highest (80-90 grs. and 116-122 grs.) with the same types, the intermediate one (101-107 grs.) with a different type. There is sufficient difference in weight between the highest and the lowest of these units not to deceive a Levantine, used to the miscellaneous currency of the Greek world. Where there might have been a difficulty, the question was decided by a different type. In the same way the Egyptian mint produced simultaneously tetradrachms of Rhodian and of Phoenician standard,¹⁶⁸ the weight of which fluctuates considerably. It may be suggested that the two heaviest of these sets of didrachms were struck after their model.

The question of the pieces of 80-90 grs. is more difficult. Müller apparently regards them as later than the others and as didrachms of what he calls the "Asiatic" (i.e. Samian) system,¹⁶⁹ reduced through lapse of time. But surely the reduction involved (the usual weight of the Samian tetradrachm is 203-8) is too great. Side by side with these pieces of 80-90 grs. we may put another coin (M. i. 182), wt. 43 grs., their

¹⁶⁷ Cp. the weights of the Rhodian tetradrachms, Nos. 89, 90, above, 222-237 grs., and of the contemporary regal and satrapal money of Egypt.

¹⁶⁸ Svoronos, pp. 104 seqq. and 183 seqq.

¹⁶⁹ i.e. that employed for the tetradrachms of the fourth century.

half. At the end of the previous period, too, we have noticed a coin of Barca (p. 172, above, and *M. Suppl.* 325 A), wt. 159·8 grs., which may be a double of the same unit. What is the standard? Müller calls the Barcean piece a "Phoenician" or "Asiatic" tridrachm. If, however, it were a tridrachm, it would, in spite of the loss by oxydization, give a tetradrachm of 213 grs., which is too heavy, especially for the fourth century.¹⁷⁰ If, as has been suggested, we regard the pieces of 80-90 as the halves of this so-called "tridrachm", the difficulty of such a name becomes more apparent; in the first place we should get a trihemidrachm, a very awkward fraction; in the second place, such a half would postulate a whole of 160-180 grs., which would place "Asiatic" (i. e. Samian) weight out of the question.

In the end of the fourth century and the early years of the third there was in use in Crete a reduced form of the Aeginetic standard which tallies well with the weight of these coins. For example, at Chersonnesos the didrachms of the period in the British Museum range from 164·2-174 grs., at Cydonia from 137·5 through 143·2, 165·2, 172·5, to 182·7. At Polyrrhenium, for the period 330-280, the didrachms run from 163·5-176, and the drachms from 69·6-87·2, while one of the latter is over-struck upon a coin of Cyrene of this very type.¹⁷¹ As has been indicated above, the connexion between Crete and Cyrenaica was very close. Cretan mercenaries were always popular, and it was to

¹⁷⁰ Tetradrachms of ΘΕΥΦΕΙΔΕΥΣ and ΙΑΣΟΝΟΣ in the British Museum run from 195 to 203 grains.

¹⁷¹ *B. M. C.*, 10.

Cydonia that in 323 the exiles of Cyrene and Barce fled to seek the aid of Thimbron. I believe that in these coins we have to do with the same standard as we find in Crete.

The Gold Coinage.

The gold coinage of this period is more scanty than that of the fourth century, and is marked by a change first of denomination, then of weight standard. The first issues consist of Attic tetrobols and obols. It has been suggested above that the little piece of 13.5 grs. was adopted in the fifth and fourth centuries because of its adaptability to the silver, forming at the beginning the equivalent of the Samian tetradrachm at the rate of 15:1, and after Alexander the equivalent of the Attic didrachm at 10:1. If we follow the same clue, we can get an explanation of the change of denomination now under consideration. During the reign of Ptolemy Soter the silver coins most frequently met with in Cyrene must have been of Rhodian or Phoenician weight, for by the side of the Rhodian didrachms, which form the bulk of the autonomous issues, the Egyptian "satrapal" and "regal" issues (Rhodian tetradrachms and Phoenician tetradrachms and octodrachms) must have had free course. From the end of the fourth century the exchange value of gold and silver seems to have remained definitely at 10:1, and at this rate the Attic obol of 11.25 grs. would be just about the equivalent of its contemporary the Rhodian didrachm, while the Attic tetrobol would correspond to the Phoenician octodrachm.

Of the gold tetrobols we have three issues, (1) with

no mint symbol or monogram¹⁷² (M. i. 205), (2) with **Ε** (M. i. 207), (3) with **Δ**. The series of obols offers greater variety, as the following list shows:

91. *Obv.*—Head of bearded Ammon r.

Rev.—Female head r., wearing earring and necklace, the hair gathered in a knot behind.

Paris. *Α.* 0.25. Wt. 10.5 grs. E. T. Newell, 11.3 grs.

92. *Obv.*—Similar.

Rev.—Similar; behind **Ε**.

B. M. *Α.* 0.3. Wt. 11 grs. (= M. i. 60, where the weight is wrongly given).

93. *Obv.*—Similar.

Rev.—Thunderbolt between two stars.

B. M. *Α.* 0.3. Wt. 11.3 grs.

94. Another, with one of the stars replaced by a plough.

B. M. *Α.* 0.3. Wt. 11.3 grs.

95. Another, with **ΜΕ** in addition to the stars.

B. M. Wt. 10.6 grs. Paris, *Α.* 0.3. Wt. 10.7 grs.

96. Another with the head to l., one of the stars replaced by **Δ**

B. M. *Α.* 0.3. Wt. 11 grs.

97. *Obv.*—Bow-case.

Rev.—Silphium with two whorls and five umbels.

Gotha. *Α.* 0.3. Wt. 11 grs. Paris. Wt. 7 grs. (worn).¹⁷³

¹⁷² And therefore presumably at the head of the series. The single star which appears behind the horseman's back on all these issues (except one variety of (2) in Berlin) I am inclined to regard as an adjunct to the main type. The horseman would then be one of the Dioscuri.

¹⁷³ M. i. 80, who did not recognize the obverse type.

The heads on Nos. 91-6 are distinctly later than those on the corresponding little pieces of ΠΟΛΙΑΝΘΕΥΞ. If continuity of type goes for anything, we should expect Nos. 91 and 92, which show a head on both sides like the corresponding pieces of the previous period, to precede Nos. 93-6, on which new types appear. That No. 91, like the earliest silver of the period, bears no magistrate's name or symbol, reinforces the suggestion. No. 92 with Ε would then come near the beginning of the period, as a consideration of the silver didrachms with the same monogram has already led us to think likely.¹⁷³ The two stars of No. 93 and the star and ⚡ of No. 96 occur on a corresponding silver series (M. i. 153-4 and 156-9), the plough of No. 94 on the copper series (No. 112, below). No. 97 by its types stands apart from the rest; the absence of magistrate's name or symbol and the type of silphium suggest a very early date in the period.

One gold coin remains:

98. *Obv.*—Nike driving a quadriga r.; above, ΚΥΡΑ-
ΝΑΙΟΝ.

Rev.—Zeus Ammon standing l., his breast and shoulders bare, his l. resting on sceptre, his r. holding patera over thymiaterion; in field r. ⚡; below, crab.

Paris. *N.* 0.75. Wt. 110.5 grs. (Published by Babelon in *Rev. Num.*, 1885, p. 399, Pl. xv. 7.)

No. 98, of the usual types of the Cyrenaean gold staters, is of a different weight and a later style. In style it is most nearly related to the latest coin of ΠΟΛΙΑΝΘΕΥΞ (No. 71, above), though there is still some gap between. The head of the Nike looks r., instead of to front, and the treatment of the horse

¹⁷³ Above, p. 255.

and chariot recalls the coins of Philistis, while the Zeus of the reverse resembles very closely the Poseidon on third-century coins of Tenos (*B.M. C.: Crete, &c.*, p. 128, No. 7). The monogram, as has been said above,¹⁷⁵ occurs on satrapal gold coins of Ptolemy Soter, as well as on other autonomous Cyrenaean issues, and therefore the coin was presumably struck before 283. The weight standard is the Phoenician, on which the gold satrapal coins are struck, not the Attic of the obols and tetrobols above and of the staters of the previous period.

It is perhaps worth noting summarily here, at the end of the series, how the smallest gold piece forms a point of contact between the different systems through all the changes of gold standard from the fifth century downwards. The earliest gold piece is a Samian drachm (No. 31) of which the 13·3 is a quarter, and the 13·3 is itself a tenth of the Attic stater, the successor of the first coin; of this Attic stater the new little piece introduced in the fourth period is the $\frac{1}{12}$ (or obol), but it is at the same time the tenth of the Phoenician stater by which the Attic in its turn is superseded.

The Bronze Coinage.

The bronze coinage of the Cyrenaica falls mostly within the limits of the Ptolemaic period, and though the earlier issues were struck in the fourth century it seems best to discuss it as a whole.¹⁷⁶ It can be divided by style into the following groups: (1) Down to

¹⁷⁵ p. 260.

¹⁷⁶ See above, pp. 171-4, 177, for Δ E. of Barea, Euesperides and certain of Cyrene.

c. 270, with or without ethnic; first without, then with, magistrates' names and, later, with symbols. (Many of the cases of apparent absence of inscription, however, are due to poor condition.) (2) From c. 270 to Ptolemy Physcon, c. 150, with symbols and monograms of later style, *e.g.* M. i. 251-85. (3) The short period of freedom between the death of Ptolemy Apion and the Roman dominion; a few coins only. (4) The Roman period. Some of the coins without ethnic may belong to Barce or Euesperides.

As many of the bronze pieces are overstruck, we may get a little light on their chronological sequence. A fixed point is established by the coin with the very interesting reverse type of the tomb of Battus and the magistrate's name ΕΥΦΡΙΟΞ (M. i. 234-5). The same name¹⁷⁷ occurs on the ΠΤΟΛΕΜΑΙΩ ΚΥΡΑΝΑΙΩΝ coins mentioned above,¹⁷⁸ which can be dated with some certainty to 308-304. I regard the following as contemporary:

99. *Obv.*—Horse's head r.; in front ΘΕ; (beneath, symbol? or break in the die); dotted border.

Rev.—Wheel with hub and six spokes.

B. M. \mathcal{A} . 0.9. Wt. 210.9 grs.

The ΠΤΟΛΕΜΑΙΩ ΚΥΡΑΝΑΙΩΝ coins show also the name of another magistrate ΘΕΥ, whom I have sought to identify above with the ΘΕΥΦΕΙΔΕΥΞ of the Attic didrachm (No. 79), and I would add No. 98 to the coins which he signs. If the attribution be accepted, it increases the evidence for a second ΘΕΥΦΕΙΔΕΥΞ. For, if the hypothesis of a second ΘΕΥΦΕΙΔΕΥΞ put

¹⁷⁷ Unknown to Pape-Benseler and therefore unlikely to be a different person.

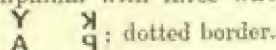
¹⁷⁸ See p. 170 note, and Svoronos, *op. cit.*, p. 11, No. 61 seqq.

forward above is correct, part of that moneyer's activities would fall within the time of Ophellas, on whose silver the Carthaginian palm-tree has already occurred¹⁷⁹; and here we have the Carthaginian horse's head.

The Paris specimen of the bronze coin with ΕΥΦΡΙΟΣ (M. i. 234) is overstruck¹⁸⁰ on a coin with the same obverse type of the bearded Ammon, but fuller and coarser as on M. i. 91: although the reverse underneath is not so clear, there are very definite traces of what I take to be the wheel which is the reverse type of M. i. 91. But the B. M. specimen of M. i. 91 is overstruck on yet another coin, which, to judge by the traces of the top of the silphium plant on the reverse, was most probably the following:

100. *Obv.*—Head of Apollo r., laureate.

Rev.—Silphium with three whorls and five umbels;



B. M. Æ. 1. Wt. 207.9 grs. (M. i. 86).

Of the large early copper coins No. 100 is the only one I have seen on which the principal umbel of the silphium is disengaged from its whorl, and in this it tallies with the umbel underlying the wheel on the B. M. example of M. i. 91. Reasons of style alone would make us place it very early among the bronze series, and the apparent absence of magistrate's name confirms this classification. Other issues which the same reasons—style, and lack of a name—would lead us to put at the same early time are: those with the head of Cyrene (inscribed ΚΥΡΑΙΑ) on the obverse, on

¹⁷⁹ See above, p. 172, and Nos. 77-8.

¹⁸⁰ Not double-struck as Müller suggests. The shape of the lips on the under type is much fuller than on the over type.

the reverse the triple silphium (M. i. 231-2); that with the head of Athena on the obverse, on the reverse a silphium (M. i. 233); and that with the head of Apollo(?) on the obverse, on the reverse a silphium (M. i. 241). The other coins which are usually given as uninscribed are either of later style or owe their apparent lack of magistrate's name to their condition. Besides the two pieces cited above of the magistrates **ΘΕ** - - and **ΕΥΦΡΙΟΞ**, we have the following with magistrates' names before c. 270:

101. *Obv.*—Head of bearded Ammon r., laureate; behind, **ΕΥ** **Ζ** outwards.

Rev.—Silphium with three whorls and five umbels;
Κ **Υ**
Ρ **Α**; dotted border.

B. M. 0.85. Wt. 208.5 grs. = M. Suppl. 222 b.
 Another specimen.

Beside this may be put the coin with bearded and diademed head on the obverse, and the same reverse, reading **ΜΙΔΑΞ** (M. Suppl. 87 b).

102. *Obv.*—Head of beardless Ammon r.; in front of neck, **Α**, and behind, **ΝΔΡ** **Ζ**; dotted border.

Rev.—Silphium with three whorls and five umbels;
Υ **Χ**

B. M. \mathcal{A} . 0.9. Wt. 217 grs. (and two other specimens, the reverse inscription only visible on one) = M. i. 82, 83, and 224-5 (where the inscriptions are not given).

With this would go the coin with head of Apollo and silphium, also reading **ΑΝΔΡ** (M. Suppl. 87 a).

103. *Obv.*—Similar; in front, **Ν** **Ζ**; dotted border.

Rev.—Similar; in field r., traces of **ΚΥ**] **ΡΑ**?; linear border.

B. M. \mathcal{A} . 0.6. Wt. 62.9 grs. The inscription is not certain (M. i. 81 or 84?, 226-7).

104. *Obv.*—Similar; behind, **THP** ζ ; dotted border.

Rev.—Triple silphium; **KY P**.

B. M. \mathcal{A} . 0.6. Wt. 64 grs. [*Obv.* inscription off the coin]. Imhoof (*Antike gr. Münz.*, p. 109). M. i. 228-30.

105. *Obv.*—Similar, with fillet in front(?); behind **HP**; linear border.

Rev.—Silphium with three whorls and five umbels; linear border.

B. M. \mathcal{A} . 0.65. Wt. 70.2 grs. Inscription is not certain (M. i. 81? and 84?).

106. *Obv.*—Head of Apollo with flowing hair r.; in front - - - **PH** ξ .

Rev.—Silphium with three whorls and five umbels; in field r., ear of corn.

Hunter. \mathcal{A} . 0.85. Wt. 181 grs. (Macdonald iii. Cyrene, No. 30.)

The head on the obverse recalls that on the **ΦΕΙΔΩΝΟΞ** didrachms above (Nos. 76-7), while the ear of corn appears on the **ΘΕΥΦΕΙΔΕΥΞ** didrachms in the same group.

107. *Obv.*—Free horse r.; [above, star]; exergual line; linear border.

Rev.—Wheel; to l. **ΝΙΚΩΝΟΞ** ζ outwards; dotted border.

B. M. \mathcal{A} . 0.75. Wt. 123.2 grs.¹²¹ = M. i. 95.

¹²¹ As evidence for the contention that most of these copper coins really have a magistrate's name or symbol, it may be mentioned that of three specimens of No. 107 in the British Museum only one shows the inscription and that with difficulty, while none shows the star with unmistakeable clearness; the Hunter specimen shows no inscription. Of eleven specimens known to Müller (i. 28, note 6), only one showed the inscription clearly.

108. *Obv.*—Horseman walking r.; between horse's forelegs, **AM**; dotted border.

Rev.—Wheel with hub bisected by two spokes; in the l. half, two spokes; in the r., silphium plant with three whorls and five umbels.

B. M. \mathcal{A} . 0.85. Wt. 135.3 grs. = M. i. 98.
Another similar with **ΞA** (M. i. 97).

With this may be mentioned the following, which recalls the type of the gold drachms with **ΧΑΙΡΙΟΞ**, as does No. 107 those with **ΠΟΛΙ**.

109. *Obv.*—Horseman galloping r.; behind, **KY**.

Rev.—Wheel with hub and four spokes; in l. section, silphium with two whorls and five umbels; linear border.

B. M. \mathcal{A} . 0.85. Wt. 112.7 grs. (restruck) = M. i. 248. Another = M. i. 96.

No magistrate's name or symbol has yet been noted on coins of this issue. A piece of similar types (M. i. 247) has on the reverse **KY** and a crab: this would connect it chronologically with the gold and silver issues of the Ptolemaic period bearing the same symbol.

110. *Obv.*—Crab; dotted border.

Rev.—Jerboa r. **ΕΥΑ** - -; dotted border.

Paris = M. i. 99 (cp. *ibid.* Suppl., 99 A).

There is a fourth letter, possibly a **Γ**, to be read on the Paris specimen. On another coin (M. i. 340) the jerboa is turned to the l., and the magistrate is **ΞΝΞΙ(ΟΞ)**. **ΞΝ** occurs on silver didrachms (M. i. 178 and 161), and we meet the same pair in the following little group (M. i. 88-90 and 237):

111. *Obv.*—Gazelle r.; above, **ΞΝ**; in field r., bunch of grapes; dotted border.

Rev.—Silphium with five whorls and seven umbels; dotted border.

B. M. \mathcal{A} . 0.75. Wt. 115.6 grs. (= M. i. 89 A).

Another example with a jerboa for symbol in place of the bunch of grapes, and **EYA** in place of **ΞΩ**, appeared in the Philipsen Sale,¹⁸² and there is yet a third variety (M. i. 89, and B. M.) with branch as symbol and an uncertain magistrate's name, of which the first letter seems to be **Γ**. Attached to this group are two coins with the same types (though the gazelle is turned to the left), and the magistrate's name in full. On these we find **ΞΩΞΙΞ** (M. i. 90 A) and the very dubious **ΑΝΘΙΠΩΝ** reported by Sestini (M. i. 90).

All of the foregoing must be later than No. 101, on a specimen of which one of them is over-struck (M. i. 88 A). M. i. 88-90 will all belong to the same group, though Müller gives no magistrate, no ethnic, and sometimes no symbol.¹⁸³

112. *Obv.*—Head of Apollo (?) r., the hair falling in long curls from the crown of the head.

Rev.—Gazelle r.; above, **KYPA**; in field r., plough.

B. M. *Æ.* 0.45. Wt. 17.4 grs. = M. i. 246.
(Müller calls the symbol "*une couronne*".)

Another specimen, B. M., *Æ.* 4, Wt. 12.4 grs. = M. i. 245, has for symbol a plectrum of the shape found on certain Lycian coins,¹⁸⁴ called by Müller "*un chapeau*". There was doubtless a symbol also on the coins of the same types figured under M. i. 244. The plough, as symbol, we have met with on the small gold of the fourth period above (No. 94).

¹⁸² Hirsch, xxv, lot 3243; two specimens, also one in the British Museum, on none of which is the name clear, though their reverses read **KYPA** plainly.

¹⁸³ The Hunter coin (Macdonald, iii. Cyrene, No. 28), which Müller gives under No. 88 without a symbol, really has the branch.

¹⁸⁴ Cp. B. M. C.: *Lycia*, Pl. xii. 10.

The following coins, though they have (apparently) no magistrate's name or symbol, seem stylistically later than any of the pieces given above.

113. *Obv.*—Head of bearded Ammon r. ; dotted border.

Rev.—Wheel with hub and six spokes ; K] Y ; dotted border.

B. M. 0.9. Wt. 142 grs. = M. i. 93. (Müller reads the Y as P.) The comparative lateness of this issue is shown by the fact that one specimen is struck over the Carthaginian third-century copper with head of Demeter and horse's head types (M. i. 94 A).

114. *Obv.*—Horse stepping r.

Rev.—Wheel with hub and four spokes ; K Y
P A

B. M. A. 0.5. Wt. 34.7 grs. (= M. i. 250).

Some of the coins just described Müller places "*avant le quatrième siècle*".¹⁸⁵ But this is most doubtful. He bases his conclusion on the style and still more on the fabric, which is very thick and often shows a strong incuse on the reverse. But the style, although it is rough, is not therefore necessarily early, and its roughness is often emphasized by the condition of the coins themselves, which is for some reason almost invariably poor.¹⁸⁶ If one met the rough style, and especially the thick fabric, on Sicilian coins, it is true one would naturally think of the fifth and early fourth centuries. But Cyrene lay on the outskirts of the Greek world, and the same thick fabric and marked

¹⁸⁵ i. p. 37.

¹⁸⁶ This circumstance is also probably the reason why so many coins appear in Müller's work and elsewhere as completely anepigraphic, whereas it may be supposed (and in many cases can be demonstrated) that they often bore ethnics and generally magistrates' names or symbols.

incuse reverse meet us even in the copper coins struck under Roman suzerainty after the death of Ptolemy Apion. Further, the style of the heads (*e. g.* Nos. 102-6) recalls that on the latest issues of the fourth century (Nos. 74, 75, above, ΠΟΛΙΑΝΘΕΥΞ), and the same is true of the treatment of the silphium which, as a rule, is of that thick florid type characteristic of the issues just mentioned.

The magistrate's names, at least thirteen in number, raise a difficulty. They are written at length or in abbreviation, as is the manner of the fourth century, not in monogram, as is the fashion of the next period. But of these magistrates there is only one who appears in what we should naturally be inclined to regard as the corresponding silver or gold issues of the fourth century. That one, however (the ΘΕ - - - - of No. 99), is in a sense an exception which explains the rule, for the ΘΕΥΦΕΙΔΕΥΞ of the Attic didrachm has been placed last of all the magistrates of that series. Similarly ΕΥΦΡΙΟΣ occurs also on Ptolemaic gold dateable to 308-305,¹⁸⁷ and the other apparent correspondences between silver and copper likewise fall within Ptolemaic times. They are not numerous: ΞΩ on No. 110, &c., and on the silver didrachms, M. i. 161, 178; the plough on No. 112 and on the gold obol (No. 94). In other words, all these correspondences are later than 310—a date which the style of the bulk of the coins confirms—and therefore, if any except the uninscribed ones are to be placed earlier in the fourth century, we must assume that the striking of the gold and silver and of the copper issues were at that time entrusted to different authorities. Against this assump-

¹⁸⁷ See above, p. 268.

tion the few coincidences of name that do occur in the later period would militate. But why are the coincidences so few? Possibly the output of silver at the Cyrenaean mint was restricted in the first years after the recovery of the revolted city in 308, whether for political reasons or through economic exhaustion.

To the second period of copper coinage from 270 down to Ptolemy Physcon the bulk of the common copper coins of Cyrene belongs. The three most important issues are: (1) *Obv.* Head of bearded Ammon, *Rev.* Palm tree (M. i. 251-69); (2) *Obv.* Head of Apollo, *Rev.* Lyre (M. i. 270-82); (3) *Obv.* Head of bearded Ammon, *Rev.* Silphium **KOINON** (M. i. 104-13). There is a silver didrachm of Rhodian weight of the same style, types, and legend as this latter class (M. i. 269). The activities of the philosophers Ecdemus and Demophanes in the Cyrenaica have been referred to above,¹²⁸ where it was suggested that the "new form of rule" ascribed by Eusebius to Demetrius the Handsome should really be laid to their account. Whether this suggestion be accepted or no, it is difficult to avoid associating the **KOINON** issue with the government of the comrades of Aratus, whose date (between 252-236)¹²⁹ fits excellently with the style of the coins. It is, further, remarkable that on some of the copper coins there occurs the monogram Θ , of which the obvious resolution is $\Delta\text{HM}(\text{O}\Phi\text{A}\text{N}\text{H}\Sigma)$. It is always possible that these coins were struck under Ptolemaic suzerainty: a *κοινὸν τῶν νησιωτῶν* existed in such conditions under Ptolemy I and II, though it has left us no coins. But this view does not seem so satisfactory

¹²⁸ See above, p. 259.

¹²⁹ See above, p. 250, note.

as the attribution to Ecdemus and Demophanes, while against it may be urged the large number of *κοινόν* coins over-struck upon regal Ptolemaic issues, and later the equally large number of regal Ptolemaic issues of all sorts and sizes over-struck upon coins of the *κοινόν*. This would indicate in each case a desire to suppress and obliterate the existing currency, for which we can find a motive only if the *κοινόν* were independent of Egyptian control.

The Apollo-Lyre series (M. i. 270-82) contains specimens restruck on the Ammon-Palm tree series (M. i. 251-69) and must therefore be the later of the two.¹⁹⁰ With some hesitation I would put both of these issues before the *κοινόν* coins. The Apollo-Lyre series is no doubt later than the other; but to judge by style, it is not much later,—in fact, it presumably follows it directly. Now both these series contain coins of very poor work, but they also contain coins of very neat work, and that not in one issue of the series but throughout. Take, for example, the Apollo-Lyre series. Here we have neat and careless style in the group without symbol or monogram (M. i. 270), in that with the crab (M. i. 280), with the star (M. i. 272) and in the group with letters (M. i. 274-8). The same holds good (though there is less variation) in the Ammon-Palm tree series. This tends to show that the degeneration is not due to lapse of time so much as to copying by inferior workmen. If it were true that there was a correspondence between the monograms of the Apollo-Lyre series and of the Ptolemaic coins struck as Müller suggests after 305 B.C.,¹⁹¹ the date of the former would

¹⁹⁰ M. i. 281.

¹⁹¹ i. p. 76.

have to be altered. The monograms said to coincide are P , P , and P . Now P certainly occurs on the Apollo-Lyre series (M. i. 275), but on the Ptolemaic coin he cites (M. i. 275) the monogram is PI , as on the earlier autonomous silver (M. i. 173); P is not sufficiently distinctive; and for P on the Apollo-Lyre series (M. i. 278) Sestini is our only authority.

Two minor points may here be noticed. The view of Müller that the crab may be regarded as a local mark (almost alone among the symbols of Cyrene), and as referring to Apollonia, the port of Cyrene, has been accepted above. The following seems to offer some confirmation of the view.

114 a. *Obv.*—Head of Apollo r.

Rev.—Lyre; K $\begin{smallmatrix} \text{Y} \\ \text{A} \end{smallmatrix}$; below the K, crab.

B. M. \mathcal{A} . 0.7. Wt. 70 gra. (= M. i. 280).

The ordinary inscription on these coins is $\begin{smallmatrix} \text{K} & \text{Y} \\ \text{P} & \text{A} \end{smallmatrix}$

Here a crab is substituted for the P. It seems incredible that the A would be left hanging in air, and it should therefore admit of an independent interpretation as some kind of mint mark, the initial either of a magistrate's name or of Apollonia.

In the Ammon-Palm tree series there is a group with letters from A to M (lacking Λ).¹⁹² These Müller rightly refuses to regard as numerals in the strict sense¹⁹³ of the term, preferring to interpret them as mint-marks. In view, however, of the use made of the alphabet for reckoning on contemporary coins of

¹⁹² The Hunter coin with Y (Macdonald iii, Cyrene No. 52) presumably belongs to the same series.

¹⁹³ i, p. 76.

Egypt and Phoenicia ¹²⁴ it seems most likely that they indicate the issues of successive years.

With these two groups, Ammon-Palm tree and Apollo-Lyre, I would put, for style's sake, two or three other coins,—one with *Obv.* Head of Apollo to l.; *Rev.* Lyre, different in treatment (M. i. 271), and the following pieces :

115. *Obv.*—Head of Libya r., filleted, the hair hanging in long curls below.

Rev.—Gazelle r.; above, KY.

B. M. Æ. 0.6. Wt. 45.4 grs. (M. i. 242, where an ivy-leaf(?) symbol is given below the gazelle's belly.)

116. *Obv.*—Similar.

Rev.—Silphium with three whorls and five umbels;

K Y
P A

B. M. Æ. 0.7. Wt. 73.5 grs. (restruck on Ptolemaic Æ. with reverse, eagle r. with open wings); (M. i. 238).

117. *Obv.*—Head of Athena in crested Corinthian helmet r.; dotted border.

Rev.—Similar; inscription obscure.

Maj. J. S. Cameron. Æ. 0.6 (badly double-struck).

118. *Obv.*—Head of Apollo r., laureate.

Rev.—Bow, quiver, club (or arrow?) and fulmen; to l., KYPANAΞ Ε.

Paris. Æ. 0.65 (restruck on Ptolemaic Æ. with reverse, eagle with open wings)=M. i. 285.

The head on No. 118 has certain Soter-esque traits, and almost suggests a portrait, but this is not against the coin being assigned to the time of Magas' independence of Ptolemy II. Magas was the step-son of Soter.

¹²⁴ *Hist. Num.*², pp. 850 and 797.

One group of bronze coins still remains to be considered (M. i. 283, 339, 341).

119. *Obv.*—Head of Apollo r., laureate.

Rev.—Free horse r.; above, star and changing letter; beneath, changing symbol.

- (1) **KY** and crab. B. M. $\mathcal{A}E$. 0.65. (2) **κ** and cornucopiae. B. M. $\mathcal{A}E$. 0.7 (restruck).
(3) **E** and branch laden with fruit. B. M. $\mathcal{A}E$. 0.7.

These coins are more degraded in style than the Apollo-Lyre group above, and the example of (2) is overstruck upon a coin of the Ammon-Palm tree series. A later date than either of these is therefore indicated. Instead of **KY** we find on (2) a monogram, and on (3) the letter **E**; and when **E** is associated with the branch which we have met with before, we cannot resist concluding with Müller¹³⁵ that we have here the symbol and initial of Euesperides. The monogram **κ**¹³⁶ he takes as representing the little-known town Balagrae, on the analogy of another coin (of the Ammon-Palm tree series), M. i. 342, which bears the same monogram, and which he takes to be an "alliance" coin of Balagrae and Darnis. Here, it may be noticed, we have in No. 119 (1) an example of the crab symbol used with local significance. But the objection may be raised in connexion with No. 119 (3) that the name of the westernmost state of the Pentapolis after 240 B. C. was not Euesperides but Berenice. This is a real difficulty the solution of which may suggest a date for the group.

¹³⁵ M., No. 339.

¹³⁶ On some specimens it looks more like **K** and it is never very clear. See, however, M. i, p. 96. If it be **K** the town Caenopolis mentioned by Ptolemy, is available.

After the Apollo-Lyre group, that is after 250, if the dating above is correct, or at least after 220, there are no autonomous coins of the Cyrenaica save these until the period of the Roman suzerainty. In their place we have a regular series of coins with Ptolemaic types and inscriptions. The revival of the autonomous coinage points therefore to a time of revolt and independence, and it is at just such a time that the name Berenice with its Ptolemaic associations might be rejected in favour of the older name Euesperides. Such a revolt took place under Ptolemy Physcon¹⁹⁷ (c. 136 B.C.), and to that epoch I would assign the group.

FIFTH PERIOD.

In 96 B.C. Ptolemy Apion, the last ruler of Cyrene, died, and bequeathed his kingdom to Rome. For twenty years the Romans did not reduce the district to a province, but contented themselves with taking up the crown lands and laying a tax on silphium (a royal prerogative?), leaving the inhabitants their autonomy. To this period Müller assigns with justice the coins with head of Roma (sometimes inscribed **ΡΩΜΗ**) on the obverse, and a bee on the reverse (M. i. 100, 286, and Suppl. 286 A), and here too I would place the following coin.

120. *Obv.*—Head of bearded Ammon r.

Rev.—Bow case to l. ; $\begin{smallmatrix} \text{K} & \text{Y} \\ \text{P} & \text{A} \end{smallmatrix}$; to r. X

B. M. Æ. 0.75. Wt. 47.9 grs.

¹⁹⁷ Bouché-Leclercq, *Histoire des Lagides*, ii. 36, 37.

A late date for this coin seems to be justified by several reasons. The head, though in a sense neat, is different in style from that on the other autonomous bronze coins, e.g. the Ammon-Palm tree series, and recalls rather that on the Roman denarii of Cornificius or Scarpus, struck in Africa in the second half of the first century.¹⁹⁸ Thus, the horn is curled well up under the ear as on these denarii, and on the copper of the quaestor Pupius Rufus struck in the Cyrenaica (M. i. 424), instead of turning downwards in crescent shape as on all the Ammon heads of the third century. The fabric inclines to the Egyptian form with bevelled edge, which does not appear on any Cyrenaean coins (with the curious exception of the KOINON group) earlier than those struck by the Roman governors in the first century B.C. The brief period of autonomy under Roman suzerainty (96-75 B.C.) would provide a satisfactory occasion for the issue.

To the coins struck by Roman governors after the organization of the Cyrenaica as a province in 74 Svoronos, following a suggestion of Waddington,¹⁹⁹ has added the set of coins bearing the name of Crassus either in Greek or Latin (Svor., *op. cit.* 1901-1904). Though we do not know definitely of Crassus governing the province, yet, as Waddington pointed out, the style and fabric, as well as the mixture of Greek and Latin, instantly suggest the Cyrenaica; and further it may be noted that on one the inscription ΠΤΟΛΕΜΑΙ(ΕΩΝ) is written in two vertical columns on either side of the head, a characteristically Cyrenaic way.

¹⁹⁸ *B. M. C.: Rom. Republic*, vol. ii, pp. 577, 578, and 583.

¹⁹⁹ For a discussion of the Crassus coins see Svoronos, *op. cit.* 1901, and Waddington in Feuardent's *Cat. de la Coll. Demetrio*, ii, pp. 3 and 8.

If the following coin may also be attributed to Crassus, his connexion with the Cyrenaica is definitely established, and with it the mint district of the other coins bearing his name.

121. *Obv.*—Head of Libya r.; **K P**.

Rev.—Silphium with two whorls and five umbels;
K Y.

B. M. Æ. 0.6. Wt. 41.8 grs. Another (Hunter),²⁰⁰
same *obv.* die(?); *rev.* inscription

K	Y
A	P

M. i. 239.

This coin is again of a fabric pronouncedly Egyptian, and is quite different from the autonomous bronze coinage of the fourth-second centuries. The reading of the obverse has been given by Müller (*l. c.*) as **KYP**; there is, however, no trace of a **Y**, and we should not expect an ethnic on the obverse as well as on the reverse. **KP**—might be simply another magistrate, but fabric and style would lead us to separate the coin from the ordinary bronze issues and to put it where it finds its closest analogies in these respects and also in type and inscription. For type and fabric we may compare the coin of similar module bearing the head of Libya struck under Pupius Rufus and Scato, governors of the Cyrenaica (M. i. 428 and 431).²⁰¹ The same head appears on one of the coins bearing **KPAΣ** (Svor., No. 1902). Even if the attribution of No. 121 to Crassus be considered ill-grounded, the fact that the heads of Libya and Apollo—types so characteristic of

²⁰⁰ Maedonald, iii. Cyrene, No. 29.

²⁰¹ Müller (*l. c.*) calls the head in both cases Apollo. But, as he recognized later (Suppl., p. 13), the relief found by Smith and Porcher at Cyrene (*B. M. C.: Sculpture*, i. 790) shows us that Libya was conventionally represented by this peculiarly formed coiffure of straight curls.

the Cyrenaica—occur on the group bearing the name of Crassus²⁰² confirms the attribution of the group to that district. If it be accepted, the question arises whether some of the examples which do not read ΠΤΟΛΕΜΑΙ may not have been struck at Cyrene rather than at Ptolemais.

The latest coins attributable with any certainty to the Cyrenaica were missed by Müller, though Cavedoni had published them in 1851.²⁰³ They have since been in part republished by Mowat.²⁰⁴

122. *Obv.*—Head of Drusus (son of Tiberius) r. laureate; behind, lituus; in front, simpulum; a round, ΔΡΟΥΞΟΣ ΚΑΙΣΑΡΑΥΓΟΥΣΤΟΥΥΙΟΣ ☉; dotted border.

Rev.—Bare heads of his twin sons Tiberius and Germanicus Caesar, face to face; above, ΤΙΒ ΓΕΡ; beneath, ΚΑΙΣΑΡΕΞ

Æ. 1-1. Wt. 241.2 grs. B. M. Two specimens. [See Hunter Cat., iii, pp. 738 f., for other specimens.]

123. *Obv.*—Similar, without lituus or simpulum ΔΡΟΥ ΞΟΣΚΑΙΣΑΡΑΥΓΟΥΣΤ

Rev.—Similar.

Æ. 0.95. Wt. 168.2 grs. B. M.

124. *Obv.*—Camel r. with halter; above Λ(?); all in olive wreath.

Rev.—Similar.

Æ. 0.9. Wt. 70 grs. B. M. (from the Collection of the late Count de Salis) = Mionnet Suppl. t. ix, p. 247.

Mionnet, in publishing No. 124, mentions a cornucopiae on the obverse behind the camel, but not the Λ above. He had not seen the original himself, and it

²⁰² Svor., Nos. 1902, 1904.

²⁰³ *Annali dell' Istituto*, 1851, p. 231.

²⁰⁴ *Rev. Num.*, 1911, p. 350 seqq.

may be suspected that the coin he describes is the one actually under discussion. There is behind the camel a long thick stroke which might have been taken for a cornucopiae, but which seems to be almost certainly the result of a break in the die. It is possible that the Λ above the camel's back, which is not certain, may be due to a similar cause. The obverse type of No. 124, no less than the rough style and "Egyptian" fabric, with bevelled edge, all point to North Africa as the place of origin. And, if the Λ on No. 124 be accepted, it makes its attribution to the Cyrenaica certain. On the coins of the *quaestor pro praetore* A. Pupius Rufus (M. i. 422-8) we get the same letter in both Greek and Latin script, and there is little doubt that it should be taken as the initial of Libya.²⁰⁵ Even without the support of this letter the camel points surely to the Cyrenaica, where it has already appeared as a type on the coins of Lollius (M. i. 391-4). In imperial times the Greek language does not seem to be employed on coins of North Africa except at Leptis Minor and under Juba II of Mauretania. If any language except Latin appears, we may expect the coins to have been struck in a place where that language was at home; thus in the towns west of the Pentapolis (except Leptis) it is Punic which appears with Latin. And Cyrenaica is the only district of North Africa where the Greek language was naturalized.²⁰⁶

Tiberius and Germanicus Caesar, sons of Drusus and

²⁰⁵ M. i, p. 164.

²⁰⁶ That the later Roman issues of the Cyrenaic mint bear Latin inscriptions need not disturb the argument; cp. the hesitation between the two languages at Caesarea in Cappadocia under Claudius-Nero-Vespasian (*B. M. C.: Galatia, &c.*, pp. 46. 47).

grandsons of Tiberius, appear also on the first brass of the regular Roman series, their heads in two cornucopiae with a caduceus between them.²⁰⁷ They were born after October 10, A. D. 19, and Germanicus (the knowledge even of whose name we owe to these pieces and to a Cypriote inscription) died toward the end of 23, so it is possible to narrow down the date of the coins to the four years 19-23. As already stated, they are the last coins which can with any certainty be given to the Cyrenaica. Later attributions are discussed and dismissed by Müller (i, pp. 171-4).

PTOLEMAIC ISSUES AT CYRENE.

A note may be added on the coins struck at Cyrene in the names of the Ptolemies. During the reign of Ptolemy Soter, as has been long recognized, there are, outside of the unmistakable **KYPANAION ΠΤΟΛΕΜΑΙΩ** group (Svor., Nos. 61-4), certain monograms common to the Ptolemaic and to the autonomous coinage of Cyrene; for example **IK**², **IP**², **KE**. (Svor., Nos. 65-72, Pl. iii. 6-12, *Æ*.; Nos. 102, 147, 151, 152, Pl. iv. 3, 4, v. 1, 2, 4, *A*.) The copper Svoronos assigns to the years immediately succeeding Magas' re-occupation, 308-304; but, as has been suggested above, the corresponding Cyrenaean silver with these monograms, as well as the corresponding Ptolemaic gold, seems certainly later than 300. It is also possible that the group of copper and silver drachms with the name of Alexander (Svor., Nos. 49-58, Pl. ii. 27-34) were issued from the mint of Cyrene. The similarity in style between the heads, especially on Svor., Nos. 51 and 57

²⁰⁷ *Rev. Num.*, 1911, pp. 347-9, Pl. viii. 10 (on p. 349 the date of the death of Germanicus is given as 23 instead of 23).

(Pl. ii. 29 and 30), and on some of the Cyrenaean didrachms of Rhodian weight, seems too close to be accidental. On Svor., No. 53, the letter Γ (which occurs also on the definitely Cyrenaic coin, Svor., No. 71, though this is not conclusive) is sometimes written in characteristic fashion as Γ ; Svor., Nos. 55 and 56 show symbols, a thing exceptional in the regular Ptolemaic series, and both of the symbols in question—a bunch of grapes and star—occur at Cyrene.²⁰⁸

Svoronos has shown that the Ptolemaic gold staters with the elephant-quadrige type form, with the Rhodian tetradrachms with Pallas Promachos reverse, a more or less homogeneous group of "satrapal" issues to be dated 305–285.²⁰⁹ Some of these gold staters (Svor., No. 101 with the apple branch,²¹⁰ Svor., Nos. 102, 147, 151, and 152), avowedly belong to the Cyrenaica, and the re-attribution of the group of copper (Svor., Nos. 65–72) to the same district raises the further question whether a larger portion of the satrapal issue, which possesses at least two monograms (Φ and \mathcal{R}) in common with it, should not be assigned there also. If so, it would supply an explanation of that scarcity of autonomous Cyrenaean silver coinage in the early years of the century which we have already seen reason to suspect.²¹¹

Besides these, Svoronos assigns to the Cyrenaica

²⁰⁸ The bunch of grapes on a copper coin (No. 111, above) which for quite other reasons I have given to the Ptolemaic era; the star often (cp. Nos. 93 seqq., above).

²⁰⁹ Svor., Nos. 101–52.

²¹⁰ Not the silphium as Svoronos says. Cp. the symbol on the Cyrenaic didrachm inscribed $\text{BA}\Sigma\text{I}$ (M. i. 364), and the late \mathcal{A} , No. 119 (3) above. Mr. Newell tells me that a find has recently been made containing coins of this type mixed with silver Rhodian didrachms of Cyrene with the two stars symbol (M. i. 153).

²¹¹ See above, pp. 254, 260.


during this period (304-285) other Ptolemaic gold, silver, and copper issues (Svor., Nos. 304-37). The first is a gold coin which by its weight (44 grs.) falls into line with the contemporary autonomous gold tetrobols mentioned above (p. 265); the symbol and letter (crab and **Ι**) suggest that we have here to do with one of the magistrates who appear (also with a crab) on the later autonomous silver as **Ν** or **Ξ** (M. i. 162 and 165). The rest are silver didrachms of Phoenician weight with the inscriptions **ΒΑΣΙΛΕΩΣ ΠΤΟΛΕΜΑΙΟΥ** and **ΒΑΣΙΛΙΞΗΣ ΒΕΡΕΝΙΚΗΣ**²¹² (all of the latter and certain of the former bearing the monogram **Μ** in some shape or other), and copper inscribed **ΒΑΣΙΛΕΩΣ ΠΤΟΛΕΜΑΙΟΥ**, variously abbreviated, with the same monogram.

The monogram has been explained plausibly enough as that of Magas and the head accompanying the inscription **ΒΑΣΙΛΙΞΗΣ ΒΕΡΕΝΙΚΗΣ** has been generally recognized as that of Berenice II. But here we have a serious difficulty. Berenice II was the daughter of Magas. Why should he—the ruler of Cyrene who issued no coins in his own name²¹³—strike in the name of his daughter, and then add his own monogram? There are only two solutions of this impossible situation: either the portrait is not that of Berenice II or the monogram is not that of Magas. Svoronos (*l. c.*) adopts the first explanation. But the style is quite late, with a rather poor portrait of Soter and very

²¹² It is perhaps worth noting here that the symbol given by Poole (*B. M. C.: Ptolem.*, p. 60, No. 12) and Svor., No. 319, as a silphium plant is really a bow case, while that on *B. M. C.: Ptolem.*, p. 39, No. 25, and Svor., No. 322, as **Χ** is probably the familiar apple branch of Euesperides-Berenice.

²¹³ See below, p. 290.

weak 'weedy' letters, and the female portrait is quite unlike that on the other coins with the portrait of Berenice I, while it resembles that on the accepted coins of Berenice II.²¹⁴

Apart from these difficulties, however, there is the fatal objection to the earlier date proposed by Svoronos, that examples of the copper (Svor., Nos. 324-37) are very frequently overstruck on coins of the **KOINON** class (M. i. 104 sqq.) discussed above. Of the group *Obv.* Head of Soter, *Rev.* Thunderbolt ΒΑΣΙΛΕΥΣ ΠΤΟΛΕΜΑΙΟΥ Π (Svor., No. 324) the British Museum contains seven specimens; at least three of these are thus overstruck—two upon the variety with the monogram  which shows plainly through, and one of them so inefficiently that at first sight the piece seems to be an ordinary **KOINON** coin. Of six specimens with the eagle as reverse type (Svor., Nos. 327-32) at least three are restruck, one certainly on a **KOINON** coin. Similar specimens of Svor., No. 335 with Pegasus reverse, and Svor., No. 337 with prow reverse, are restruck on coins of Cyrene, the silphium plainly showing through, and probably also on **KOINON** types. This group of coins, then, must be later than the **KOINON** coins, i.e. later than c. 250 B.C., and the portrait is therefore that of Berenice II.

Müller reached the same conclusion without availing himself of the evidence of the restruck pieces.²¹⁵ As to the monogram, he points out (*l.c.*) (1) that Magas is not the only possible resolution; (2) that Magas is by no means a rare name, occurring also on the coins

²¹⁴ For Berenice I cp. the ΑΔΕΛΦΩΝ ΘΕΩΝ coins, Svor., Pl. xiv. 15 seqq. For Berenice II, *ibid.*, Pl. xxix. 1-11.

²¹⁵ *l.* pp. 145 seqq.

of Athens and Smyrna, to which it may be added that the position of Magas himself would be likely to give the name popularity; and (3) that, if the monogram must be referred to a royal person, there is the grandson of Magas, son of Berenice II and Ptolemy III, about whom we know nothing except that he was very popular with the army, and that like his mother he was put to death shortly after the accession of his brother on suspicion of plotting for the throne.

On the strength of the first or second of these considerations the Berenice coins have been placed between the death of Demetrius the Handsome and the accession of Ptolemy III,²¹⁶ when it has been supposed that the latter reigned as consort of his future wife.²¹⁷ This, however, seems impossible, for the portrait is that of a mature woman, and Berenice certainly was not such at the time, while the Berenice coins, in view of the common monogram M , cannot be separated from those reading $\text{ΒΑΣΙΛΕΩΣ ΠΤΟΛΕΜΑΙΟΥ}$, some of which, as we have seen, must be later than 250.

The third explanation, that we have here to deal with the younger Magas, and that these very coins imply a condition of affairs which would account for his murder, has been suggested by Müller²¹⁸ and adopted by Six²¹⁹, who assigns to the same date the well-known bronze coins with the supposed reading ΒΑΣΙΛΕΩΣ ΜΑΓΑ .²²⁰ But there is no ground for

²¹⁶ Pauly-Wissowa, s. v. Berenike II.

²¹⁷ Mahaffy, *Empire of the Ptolemies*, p. 491, notes to pp. 183 and 196.

²¹⁸ Vol. i, p. 147.

²¹⁹ *Num. Chron.*, 1897, p. 223

²²⁰ *Svor.*, Nos. 860-61.

regarding this inscription as genuine. Svoronos puts it down to an alteration of the inscription **ΒΑΣΙΛΕΩΣ ΠΤΟΛΕΜΑΙΟΥ** either on the dies or on the actual coins. As Regling²²¹ has remarked, the truth lies with the second explanation, with the addition that the alteration has been made in recent years. This is confirmed by a careful examination of the different specimens. Apart from the manner of the inscription, there are certain points which show it to be a forgery. It only appears on one class of Ptolemaic coins, that with the head of the king of Egypt on one side and the head of Libya on the other. But these coins extend over a considerable period of time, and the engraver has not always been careful to choose coins sufficiently early to convince; compare, for example, the style of the Hunter coin with that of the two in the British Museum (Svor. 861 and 860, Pl. xxxiv. 16 and xxxiv. 14, 15). The head on Svor., Pl. xxxiv. 15 (= *B. M. C. : Ptolemies*, p. 38, No. 12) is certainly not that of Soter, as Poole had already recognized. A comparison with the coins of Ptolemy III, figured on Pl. xxx (Nos. 1-8) of Svoronos' work, suggests strongly that it represents that monarch. The shape of the head, throat, and chin, and the arrangement of the hair and the diadem, are very similar. With the disavowal of the **ΒΑΣΙΛΕΩΣ ΜΑΓΑ** coins, and the dating here suggested for those with the monogram **Μ**, all trace of the name of Magas on the coinage of Cyrene vanishes.

Coins with these types—the head (except in one instance) of Soter and that of Libya—form the staple regal copper currency of the Cyrenaica. We find the

²²¹ Apud Svor., *Urteile*, Bd. iv, p. 475.

KOINON coins often struck over them. Therefore they must have first appeared before 250. The series is only interrupted by the coins with the monogram **Μ** and by a piece with the types *Obv.* Ram r., *Rev.* Eagle l., **ΒΑΣΙΛΕΩΣ ΠΤΟΛΕΜΑΙΟΥ** in field l. star (M. i. 377 = Svor. 1243), or thunderbolt (Svor. 1244). For the latter, Svoronos, who gives them to Ptolemy V, will not allow the Cyrenaic origin which is generally recognized. But, though fabric and style do not help us here, surely the type implies a Cyrenaic origin. The ram meets us on the copper coins of Barce (Nos. 80, 81, above) and on the copper issued during the government of Pupius Rufus and Scato in the first century (M. i. 423 and 430).

Can the monogram **Μ** be accepted as that of the younger Magas? Müller has with some reason maintained that the **ΒΑΣΙΛΙΣΣΗΣ ΒΕΡΕΝΙΚΗΣ** coins are to be assigned definitely to Berenice-Euesperides on the strength of the wreath of apple-branch, the club type with its reference to Heracles, and the particular connexion between the princess and the city, to which she may have stood in the same relation as Arsinoë, wife of Lysimachus, did to Cassandrea, Tium and Amastris;²²² and further, that her son Magas was governor for her until his death, the result perhaps, as Six suggests, of his intrigues with the army favoured by his exceptional position.²²³ But the extensive series of silver and copper coins, whether bearing the name of Ptolemy or that of Berenice, seems to imply a longer period of time than could be possible if they were due to Magas, who was murdered when little more than a

²²² Müller, i, p. 416.

²²³ *Num. Chron.*, 1897, p. 224.

boy. The frequent restriking of the copper over **KOINON** coins suggests that the one set followed close upon the other, and that its object was to replace a rebellious issue by a regal. Further, this special series with various, sometimes local, types and a local denomination,²²⁴ stands isolated in the numismatics of Ptolemaic Cyrenaica and points to special circumstances. The most obvious occasion for it would be the reconquest and reorganization of the district after the *κοινόν*—from the beginning of the reign of Ptolemy III and Berenice II onwards. The policy of reconciliation suggested by the rebuilding of Berenice would thus be shown again in this issue of definitely regal yet definitely Cyrenaic money.

E. S. G. ROBINSON.

²²⁴ The silver coins are carelessly struck, often base, didrachms of the local Rhodian standard, the weight of which fluctuates from 95–115 grains, most being about 107 grains. To judge by style, the tetradrachm of the same types, symbol *silphium*, in the Dattari collection, *Svor. Suppl.*, Pl. i. 38, belongs here also.

XI

SOME CYPRIOTE "ALEXANDERS".

(SEE PLATES XII-XV.)

THE arrival of Alexander the Great with his army in the lands bordering on the Eastern Mediterranean, and the subsequent downfall of the Persian Empire, brought about great political and economic changes throughout this portion of the ancient world. These changes, naturally, are reflected in its coinages. Up till this time the currency in these districts had consisted, in the first place, of the gold darics and silver sigloi of the Persian kings; in the second place, of the local silver issues of important commercial centres of the Cilician and Phoenician coasts, supplemented at times, for military purposes, by special issues of coin in the name and by the order of Persian satraps and generals. In addition to these various issues Athenian tetradrachms played an important part in the commercial transactions between East and West, and, in consequence, were everywhere current. This rather heterogeneous coinage came to an end with the incorporation of the lands in question into Alexander's Empire. Nevertheless, the majority of the old mints still continued in active operation as before. It was, however, no longer a local coinage that they issued, but one that conformed in types, weights, and denominations, to the money struck in the central mints of the new Empire. This uniform coinage consisted of the

gold stater of an average weight of 8.60 grammes, obverse: Head of Athene in crested Corinthian helmet adorned with snake or griffin; reverse: Winged Nike standing or advancing to the left holding wreath in outstretched right, and standard in left; the silver tetradrachm and drachm of Attic weight, obverse: Head of youthful Herakles to right; reverse: Zeus aetophor enthroned to left; lastly bronze coins, obverse: Head of Herakles as on the silver; reverse: Bow in case and club. All the above were inscribed **ΑΛΕΞΑΝΔΡΟΥ**. At times multiples and divisions of these principal denominations were struck, such as the double and the half stater, the dekadrachm and the didrachm, the triobol, diobol, obol, and hemiobol. For the eastern portion of the Empire these odd pieces generally have the same types as the principal denominations. Such was the first truly national coinage of the Greeks, destined to take the place, as a world currency, of the Persian darics and Athenian tetradrachms. The new coinage was soon being struck in various mints of Hellas, Macedonia, Thrace, Asia Minor, Phoenicia, Babylonia, and Egypt.

To the above-mentioned districts, whence Alexander's coinage was issued, must now be added Cyprus. G. F. Hill, in his catalogue of the Cypriote coins in the British Museum, publishes an Alexander tetradrachm¹ of the Paphos mint, and several bronze pieces² of the same ruler from the Salamis mint. Their attribution is certain, as the silver coin bears as mint mark a flying dove and some letters of the

¹ G. F. Hill, *Catalogue of the Greek Coins in the British Museum*, Cyprus, p. 45, Nos. 50-1, Pl. viii. 12, 13.

² Hill, *loc. cit.*, p. 65, Nos. 86-9, Pl. xii. 20-3.

Cypriote alphabet; the bronzes the mint mark ΣA .³ Considering the wealth and unusual importance Cyprus enjoyed at this very time, it would indeed be surprising if these few pieces were all that were struck here in the name of Alexander. Compared to the prolific issues of the near-by mainland they make but a poor showing.

From the earliest times Cyprus had played an important part in the history of the Eastern Mediterranean. On account of its harbours and geographical position, its wealth in minerals and forests, it was invaluable to whosoever would dominate these waters. Egyptian and Persian held it, later Lagid and Antigonid struggled for it, knowing well that with it went the naval supremacy of the Eastern Mediterranean. From the dawn of history Cyprus seems to have always been divided into many little kingdoms or city-states, each jealous and suspicious of its neighbours. Foreign domination was the easy result of the almost continuous bickerings and petty wars which tore the island for many centuries. The Persians, in pursuance of their usual policy, allowed the petty kings more or less local privileges and power which only tended to keep their mutual enmities and jealousies aflame, and so prevented any combination against the Persian rule. In spite of this continual unrest, the intermittent wars and occasional revolts, the natural resources of the island were so great, its geographical position commercially so important, that many of its cities flourished exceedingly, and became

³ The known provenance of these bronze coins confirms the attribution.

wealthy and powerful. Among these, at the time we are speaking of, were Salamis, Kition, and Paphos.

The right of coinage had been enjoyed by the Cypriote kings ever since the sixth century B.C., and seems seldom to have been curtailed by the Persians. Latterly even gold coins had been struck in considerable quantities. Thus, down to *circa* 333 B.C., we have prolific series of coins in gold, silver, and bronze to attest the wealth and commercial activity of the island. Then, all at once, the coinage practically ceases. Of Salamis we have only a few insignificant bronze coins of Alexandrine types, and a remarkably scant issue of local coins⁴ to cover the important period from 333 to 306 B.C., the year in which Demetrios Poliorketes secured Cyprus; of Kition we have only half-staters of the local king Pumiathon, and these only dated from 323/2 to 316/5⁵—certainly a most inadequate coinage for two such cities as Salamis and Kition in a particularly flourishing period of their histories. Just before the arrival of Alexander in the East the following kings and cities were coining in Cyprus: Pumiathon of Kition, Stasioikos (?) of Marion, the dynast of Paphos, Pnytagoras of Salamis, and Pasikrates of Soli. On the other hand, as stated above, after Alexander's arrival we have of Nikokreon of Salamis only a few rare coins; of Pumiathon of Kition no coins at all between 332 and 323 B.C., then a few dated half-staters until his death. Of Paphos we have, in addition to the Alexander tetradrachm already published by Hill, a tenth of a stater in gold, two

⁴ Babelon, *Traité des monnaies grecques*, 2me Partie, vol. ii, Nos. 1188-90.

⁵ Hill, *loc. cit.*, xl-xli.

silver coins, and a few rare bronzes given by Babelon⁶ to Timarchos (*circa* 332 B.C.), and also the unique tetradrachm⁷ struck by Nikokles just before his downfall; of Marion we have a number of types,⁸ but the coins themselves seem to be very rare; of Soli⁹ we have only a silver diobol and three rare fractions of the gold stater. Thus is presented to us the strange anomaly that during the troublous Persian times when the island was torn by local dissensions and revolts, when the high seas were infested by pirates, when there was a tacit, at times even an actual state of war existing between the Greek and the Persian worlds—all of which must have been of considerable detriment to home and foreign trade—the commercial centres of Cyprus were striking coins in plenty. When, however, with the fall of the Persian Empire, peace had been restored throughout the Eastern Mediterranean, the markets and products of Phoenicia, Inner Asia, and Egypt thrown open to the Greeks, and a remarkable commercial opportunity thus presented to the merchants and ships of Cyprus, not only to take a prominent part in the carrying trade between East and West, but also to export their own island's considerable wealth in minerals, natural products, and manufactures,—the coinage seems practically to cease! Things were very different on the mainland near by. Here every city which had thrown open its gates without a struggle to Alexander was accorded local autonomy, and, where a mint had previously existed,

⁶ Babelon, *loc. cit.*, Nos. 1317-24.

⁷ Hill, *loc. cit.*, Pl. xxii. 10.

⁸ Babelon, *loc. cit.*, Nos. 1333-47.

⁹ Babelon, *loc. cit.*, Nos. 1349-53.

was allowed to continue coining; with the proviso, however, that the issues should henceforth conform in types, weights, and denominations with the regular coinage of the Empire. As a result, such cities as Arados, Byblos, Sidon, and Ake coined as they never had before, even in their most prosperous days. Can it therefore be that Cyprus, equally submissive and equally favourably situated, fell so far behind in an outward sign of the prosperity which it now too enjoyed? Furthermore, when the news of the battle of Issos and the submission of the Phoenician cities reached them, the Cypriote kings found themselves threatened with isolation, and hastened¹⁹ to renounce the Persian domination, tendering their submission, together with their fine fleets, to Alexander. The latter soon had occasion to make great use of these ships in the investment and siege of Tyre. It would therefore be strange if, in return for their submission and the invaluable services of their fleets, Alexander should have deprived the kings of Cyprus of their immemorial right of coinage, or even have curtailed it in any vital way. Much more likely that he followed a policy already adopted towards the friendly city-states of Phoenicia, and that he allowed these kings to continue coining, but with Alexandrine types and weights. Seeing, then, that Cypriote coins of autonomous types and weights almost disappear after *circa* 332 to 331 B.C., we have every reason to expect a large coinage of "Alexanders" in their place. The problem is now presented to us of picking these from out of the great mass of gold, silver, and copper coins bearing

¹⁹ Arrian, ii. 20.

the name and types of Alexander the Great which have come down to us from ancient times.

Among the thousands of Alexander tetradrachms contained in the great hoard discovered near Demanhur in Egypt not many years ago, the majority were ostensibly from Cilician, Phoenician, Babylonian, and Egyptian mints. Of the 2,645 specimens which passed through the present writer's hands, as many as 1,644 were attributable to Eastern mints. Acknowledging the great probability of Alexander coins having been struck in Cyprus it would indeed be strange if this Egyptian hoard had not contained at least a few specimens. In a monograph¹¹ on this hoard I described two uncertain series which were given to "Mints under Cilician Influence". The first series (var. 122) contained eighty-one coins with the monogram \mathfrak{K} in the field; the second series (vars. 123 and 124) contained seventy-one coins with the symbol Bow in the field. The die-cutters of these two series seem at first to have been under Cilician influence, while the peculiarly Phoenician custom was followed of using fixed or adjusted dies. My description of these types ends with the statement that "... style and manufacture together place them (the two series in question) in some district not far from the north-east corner of the Mediterranean Sea". It now seems possible to assign these two series to Kition and Salamis respectively.

¹¹ *American Journal of Numismatics*, 1912, E. T. Newell: "Re-attribution of Certain Coins of Alexander the Great".

KITION.

SERIES I. *Circa 332 to 320 B.C.*

GROUP A.

1. STATER.

Obv.—Head of Athene in crested Corinthian helmet adorned with serpent. She wears necklace, and her hair hangs in formal curls.

Rev.—ΑΛΕΞΑΝΔΡΟΥ on right. Winged Nike standing, stretches out right hand (no wreath!) and holds naval standard in left. To left, Κ; to right, CLUB.

London; Paris [Pl. XII. 1]; Berlin (two specimens, same obverse die, but one reverse has the Club and monogram *both* on the right).

2. STATER.

Obv.—Similar.

Rev.—Similar, but Nike holds wreath in right. Monogram Κ in field, but no symbol.

Vienna; London; E. T. N.¹² [Pl. XII. 2]; Paris; Turin.

3. TETRADRACHM.

Obv.—Head of youthful Herakles right with lion's skin covering, circle of dots.

Rev.—To right, ΒΑΣΙΛΕΩΣ. Beneath, ΑΛΕΞΑΝΔΡΟ (sic!). Zeus anephor seated left. Legs parallel and draped, no exergual line. In field, Κ.

E. T. N. (same obverse die as Pl. XII. 3).

4. TETRADRACHM.

Obv.—Similar.

Rev.—To right, ΒΑΣΙΛΕΩΣ. Beneath, ΑΛΕΞΑΝΔΡΟ. Similar, but monogram Κ in field.

London; Berlin (two); Vienna; Storrs; Dessewffy; E. T. N. [Pl. XII. 3, 4.] (Of this variety there are known twenty obverse, and thirty-one reverse dies. Of ΒΑΣΙΛΕΩΣ A is sometimes Λ; of ΑΛΕΞΑΝΔΡΟ E is sometimes Ξ. N is Ν).

¹² The initials E. T. N. denote the writer's collection.

5. TETRADRACHM.

Obv.—Similar.

Rev.—Similar, but inscription now reads **ΑΛΕΞΑΝΔΡΟΥ**.

E. T. N. (one obverse, three reverse dies). [Pl. XII. 5.]

6. BRONZE.

Obv.—Head of youthful Herakles of same style and description as on the silver issues.

Rev.—Club to right, below **ΑΛΕΑΝΔΡΟΥ** (*sic*!); below, quiver and bow. Monogram, **Κ** (?).

E. T. N. [Pl. XII. 6.]

GROUP B.

7. STATER.

Obv.—Similar to previous stater (No. 2), but of modified style. Behind head sometimes **A**.

Rev.—**ΑΛΕΞΑΝΔΡΟΥ** on right. Winged Nike advancing to left, holds wreath in r., standard in l. **Κ** in field.

Petrograd [Pl. XII. 7]; Berlin.

8. TETRADRACHM.

Obv.—Head of youthful Herakles as on tetradrachm, No. 5.

Rev.—**ΑΛΕΞΑΝΔΡΟΥ** on right. In exergue, **ΒΑΣΙΛΕΩΣ**. Seated Zeus of same style and description as on previous tetradrachms. **Κ** in field.

Berlin; E. T. N. [Pl. XII. 8.] (Eight obverse, and twelve reverse dies.)

9. DRACHM.

Obv.—Head of Herakles as above.

Rev.—On right, **ΑΛΕΞΑΝΔΡΟΥ**. Below, **ΒΑΣΙΛΕΩΣ**. Seated Zeus as above. **Κ** in field.

London [Pl. XII. 9]; Paris; Munich.

10. TETRADRACHM.

Obv.—Head of Herakles of different style (Müller style IV).

Rev.—Similar to previous tetradrachm. $\overline{\kappa}$ in field.

E. T. N. [Pl. XII. 10.] (Ten obverse, seventeen reverse dies known.)

SERIES II. After *circa* 320 B.C.

11. STATER.

Obv.—Head of Athene to right in crested Corinthian helmet adorned with serpent. The goddess now has flowing locks.

Rev.— $\Lambda\Lambda\Xi\Xi\text{AN}\Delta\text{POY}$ on right. Winged Nike of same style and description as on previous stater. $\overline{\kappa}$ in field.

Petrograd.¹²

12. TETRADRACHM.

Obv.—Head of youthful Herakles as on previous tetradrachm.

Rev.—On right, $\Lambda\Lambda\Xi\Xi\text{AN}\Delta\text{POY}$. Beneath, $\text{B}\Lambda\Xi\text{I-}\Lambda\text{E}\Omega\Xi$. Zeus aetophor seated to left. Differs from previous tetradrachms in style. Zeus also has his legs crossed, and there is sometimes an exergual line. Throne sometimes has back. $\overline{\kappa}$ in field.

London; Vienna (two specimens) [Pl. XII. 11 and 12]; Paris; E. T. N.; Alexandria; Hague.

The old theory that the monograms found on Alexander's coins usually contain the initials or the full name of the issuing mint has so often been called into question, and disproved, that one instinctively looks with distrust on each and every such monogram. For once, however, the old theory holds good, and

¹² There are two staters in the Hermitage (Anadol Find, Nos. 444-7) with monogram $\overline{\kappa}$ —these do not belong to Kition but to some mint north of the Aegean.

in the monogram $\overline{\text{K}}$ we must see the initials of the name **KIT***ion*. No. 3, bound by identical obverse die with some examples of No. 4 [PL. XII. 3], shows that **K** must be the first letter of the mint name. In a similar manner to the contemporary Alexandrine issues of Arados (A),¹³ Sidon (S),¹⁴ Ake (A),¹⁵ and Damaskos (D),¹⁶ Kition signs its coins with the first letters of its name—but in monogram. On the earliest of the staters (No. 1) a club accompanies the monogram as an accessory symbol in order that there might be no doubt as to their mint—Herakles, as is well known, being the patron god of Kition. This first issue of staters is identical in style with the contemporary staters of Salamis, of which more later.

The most remarkable peculiarity of these Kitian Alexanders is found on the tetradrachms, Nos. 3 and 4. Instead of the customary **ΑΛΕΞΑΝΔΡΟΥ** the inscriptions clearly give the form **ΑΛΕΞΑΝΔΡΟ**. If this had occurred once, or even twice, on our coins, it would have been considered merely as an engraver's error—particularly as the inscriptions are often rather carelessly cut, and we see **A** intended for **Α**, **Ξ** for **Ε**, and **Ν** for **Ν**. On the contrary, we find that the odd form **ΑΛΕΞΑΝΔΡΟ** occurs, without exception, on every one of the thirty-one reverse dies known for these two issues (3 and 4). It is therefore no less than certain that it was intentionally so written. Now the usual and theoretical form of the genitive ending **ΟΥ** in the

¹³ Müller, *Numismatique d'Alexandre le Grand*, Nos. 1360-72. Hill, "Notes on the Alexandrine Coinage of Phoenicia," *Nomisma*, iv, 1909, p. 2.

¹⁴ *Ibid.*, Nos. 1397-411. Hill, *Nomisma*, iv, pp. 6-7.

¹⁵ *Ibid.*, Nos. 1426-63. Hill, *Nomisma*, iv, p. 10 ff.

¹⁶ *Ibid.*, Nos. 1338-46.

Cypriote dialect is Ω , the contraction of OO . But as in the Cypriote alphabet there seems to have been no distinction made between O and Ω , in transcribing ΑΛΕΞΑΝΔΡΩ from his own alphabet to the Greek the Cypriote engraver would be just as likely to write ΑΛΕΞΑΝΔΡΟ . The confusion between pure and impure vowel sounds at about this time may also have caused the native die-cutter to stumble. The later issues, as well as the gold, all give the Attic spelling with OY . The occurrence of this, for the Alexander coinage, unique¹⁷ form, would very much favour our attribution of the coins in question to Cyprus.

Although the monogram $\overline{\text{K}}$ is not clearly visible on the bronze coin (no. 6) on account of wear, the style of the Herakles head is identical with that found on some of the tetradrachms. The engraver's error (ΑΛΕΑΝΔΡΟΥ for ΑΛΕΞΑΝΔΡΟΥ) is paralleled by the careless writing on many specimens of the larger denomination.

In group B the inscriptions of the tetradrachms are altered, ΒΑΣΙΛΕΩΣ now is placed in the exergue, and ΑΛΕΞΑΝΔΡΟΥ behind Zeus. Very soon, also, the style of the obverse is changed from Müller's¹⁸ style II to IV; the reverse remains the same, however. Some of these Herakles heads are modelled on contemporary tetradrachms struck in Egypt.

Series II is distinctly later in style than the preceding. The reverses are now also of Müller's style IV.

¹⁷ There is, in fact, one other case where the form ΑΛΕΞΑΝΔΡΟ occurs—but this must be looked upon as an error of the engraver, as the mistake is almost immediately rectified, and the succeeding reverse dies all bear ΑΛΕΞΑΝΔΡΟΥ . See also p. 317, no. 2 a.

¹⁸ Müller, *loc. cit.*

characterized by the crossed legs of Zeus. Egyptian influence is clearly seen; compare, for instance, **Pl. XIII. 12, 13**, which latter was certainly struck in Egypt. It is very tempting to connect this influence with the Egyptian occupation of the island in 320 B.C.

It is important to note that, from the commencement, these Kitian Alexanders show adjusted dies (usually $\uparrow\uparrow$). A few mints in Phoenicia and Cyprus alone seem to have followed this custom previous to Alexander's reign. They continued following it in their subsequent issues struck in his name.

About 323-322 B.C., probably soon after the death of Alexander, Pumiathon recommenced the coining of his own half staters. This did not mean the cessation of the coins with Alexander types; but the two series, as they do not overlap in denominations, probably continued appearing together until the execution of Pumiathon in 313 B.C. It is as yet impossible to indicate which, if any, Alexander coins follow the two \mathbb{K} series. In the absence of any which can with certainty be further assigned to Kition it would seem best to suppose that the mint was abolished by Ptolemy when he suppressed Pumiathon. It was also about this time that Salamis recommenced prolific coining, and so probably supplied the Kitian, as well as its own share of the island's coinage.

SALAMIS.

SERIES I. *Circa* 332-320 B.C.

1. STATER.

Obv.—Head of Athene r. in crested Corinthian helmet adorned with coiled serpent. Her hair hangs in formal curls, and she wears necklace.

Rev.—ΑΛΕΞΑΝΔΡΟΥ on right. Winged Nike standing l., holds wreath in outstretched right, and naval standard in left. In front: Bow.

Berlin. [Pl. XIII. 1.]

2. STATER.

Obv.—Similar. Same die used.

Rev.—Similar. In front: QUIVER.

Berlin [Pl. XIII. 2]; London.

3. STATER.¹⁹

Obv.—Similar. Same die used.

Rev.—Similar. In front: EAGLE.

E. T. N. [Pl. XIII. 3.] (Formerly Egger Sale XLV, Nov., 1913. No. 488.)

4. STATER.

Obv.—Similar, but other dies used.

Rev.—Similar. In front: HARPA.

London; Gotha; Petrograd; E. T. N. [Pl. XIII. 4]; Hague.

5. STATER.

Obv.—Similar.

Rev.—Similar. In front: SPEAR-HEAD.

London; Paris [Pl. XIII. 5]; Berlin; Vienna; Yakountchikoff.

6. TETRADRACHM.

Obv.—Head of youthful Herakles r. with lion's skin covering; circle of dots.

Rev.—ΑΛΕΞΑΝΔΡΟΥ on right. Zeus seated left, holds eagle in outstretched right, sceptre in left. No footstool or exergual line. In field: Bow. Beneath throne, B.

London; Paris; Berlin; E. T. N. [Pl. XIII. 6]; New York. (Two obverse, and five reverse dies known.)

¹⁹ This stater, with Eagle as symbol, must not be confused with the much more common ones from another mint (Svoronos, *Tὰ Νομισματα τῶν Πτολεμαίων*, iii, Pl. II. 1-3).

7. TETRADRACHM.

Obv.—Similar, but during the course of this issue the style changes from Müller II to III.

Rev.—Similar.²⁰ In field: Bow. No letter beneath throne.

London (six); Paris; Berlin (five specimens); Milan; Vienna (two); E. T. N. [Pl. XIII. 7, 8, 9, 10]; Yakountchikoff; Alexandria. (Seventeen obverse, and sixty-one reverse dies known.)

8. DRACHM.

Obv.—Similar, also with similar changes in style.

Rev.—Similar. In field: Bow.

London; Paris; Berlin; E. T. N. [Pl. XIII. 11.]

9. BRONZE, size I.

Obv.—Head of Herakles similar to later issues of tetradrachm No. 5.

Rev.—ΑΛΕΞΑΝΔΡΟΥ club r., and bow-case within bow. Above, ΞΑ; below, Α.

London [Pl. XIII. 12]; E. T. N.; Paris; Jelajian, Cyprus.

10. BRONZE, size II.

Obv.—Similar.

Rev.—Similar. Above, Ξ; below, uncertain letter.

London [Pl. XIII. 13, 14]; Petrograd.

SERIES II. Circa 320-317 B.C.

11. STATEE.

Obv.—Helmeted head of Athene, similar to previous staters, but slightly modified in style.

Rev.—ΑΛΕΞΑΝΔΡΟΥ on right. Winged Nike standing as before. In front: RUDDER.

Berlin; Petrograd (four); Turin; E. T. N. [Pl. XIV. 2, 3]; Egger Sale XLI, 1912, No. 379; London (three); Paris; Vienna. [Pl. XIV. 1.]

²⁰ On the latest dies there is a line beneath Zeus's feet to denote foot-stool.

12. TETRADRACHM.

Obv.—Head of youthful Herakles as on the latest issues of tetradrachm No. 7.

Rev.—**ΒΑΣΙΛΕΩΣ**
ΦΙΛΙΠΠΟΥ all on right. Zeus aetophor as before, but with legs crossed and feet resting on stool. In field: RUDDER. Beneath throne, **Τ**.

Alexandria; London; E. T. N. [Pl. XIV. 4.]

13. TETRADRACHM.

Obv.—Similar to above, but latest issues are of Müller style IV.

Rev.—Similar. In field: RUDDER. No letter beneath throne.

Alexandria [Pl. XIV. 5]; London; Paris; Vienna; E. T. N.; Hague.

SERIES III. Circa 316–306 B. C.

14. STATER.

Obv.—Head of Athene r. in crested Corinthian helmet adorned with coiled serpent; hair in formal curls.

Rev.—**ΑΛΕΞΑΝΔΡΟΥ**. Winged Nike as before. In front: RUDDER. Behind, **ΜΙΑ**.

London [Pl. XIV. 6]; Berlin.

15. TETRADRACHM.


Obv.—Head of youthful Herakles r., Müller's style IV.

Rev.—**ΒΑΣΙΛΕΩΣ**
ΑΛΕΞΑΝΔΡΟΥ all on right. Zeus, holding eagle in r. and sceptre in l., seated l. on throne with back. In front: RUDDER.

E. T. N. [Pl. XIV. 7.]

16. STATER.

Obv.—Head of Athene as on No. 14.



Rev.—**ΑΛΕΞΑΝΔΡΟΥ** on right. Winged Nike as on No. 14. In front: RUDDER and . Behind, **Ξ**.

Berlin. [Pl. XIV. 8.]

17. TETRADRACHM.

Obv.—Head of youthful Herakles as above. One variety in high, and one variety in low relief.

Rev.—ΑΛΕΞΑΝΔΡΟΥ on right. Zeus seated as on No. 15, but henceforth his legs are always crossed.


In front: RUDDER and . Beneath throne, .

Berlin (two) [Pl. XIV. 9] (high relief); Vienna; E. T. N.

18. TETRADRACHM.

Obv.—Head of Herakles as on previous tetradrachm.


Rev.—ΑΛΕΞΑΝΔΡΟΥ on right. Seated Zeus as before.

In front: RUDDER and . Beneath throne, M.

Vienna [Pl. XIV. 10.]

19. TETRADRACHM.


Obv.—Head of Herakles as before.

Rev.—ΑΛΕΞΑΝΔΡΟΥ on right. Similar to above. In front: RUDDER and . Beneath throne, NK.

Vienna [Pl. XIV. 11]; Leake, *Numismata Hellenica*, p. 7.

20. DRACHM.


Obv.—Similar to above.

Rev.—ΑΛΕΞΑΝΔΡΟΥ on right. Similar to above. In front: RUDDER and . Beneath throne, NK.

Athens (see *Journ. int. d'Arch. et Num.*, x. 1907, p. 332).

21. STATER.


Obv.—Head of Athene in crested Corinthian helmet adorned with coiled serpent. Athene's hair is in flowing locks.

Rev.—ΑΛΕΞΑΝΔΡΟΥ on right. Winged Nike as on No. 16. In front: RUDDER and ΓΕ. Behind, .

Berlin; London. [Pl. XIV. 12.]

22. TETRADRACHM.

Obv.—Head of Herakles as above.

Rev.—ΑΛΕΞΑΝΔΡΟΥ on right. Seated Zeus as above. In front: RUDDER and . Beneath throne, ΓΕ.

E. T. N. [Pl. XIV. 13]; Berlin; Copenhagen (?)—Müller, No. 635, gives a variant of the first monogram.

23. STATER.

Obv.—Head of Athene as on No. 23. Same die used.

Rev.—ΑΛΕΞΑΝΔΡΟΥ on right. Winged Nike as above.
In front: RUDDER and ☞. Behind, ΓΕ.

London [Pl. XV. 1]; Berlin.

24. TETRADRACHM.

Obv.—Head of Herakles as above.

Rev.—ΑΛΕΞΑΝΔΡΟΥ on right. Seated Zeus as above.
In front: RUDDER and ☞. Beneath throne, ΓΕ.

Copenhagen (Møller, 635 a).

25. STATER.

Obv.—Helmeted head of Athene as on previous staters.

Rev.—ΑΛΕΞΑΝΔΡΟΥ on right. Winged Nike as before.
In front: RUDDER and ΓΕ. Behind, ☞.

Leake, *loc. cit.*, p. 5. [Pl. XV. 2.]

26. TETRADRACHM.

Obv.—Head of Herakles as on previous tetradrachms.

Rev.—ΑΛΕΞΑΝΔΡΟΥ on right. Seated Zeus as before.
In front: RUDDER and ☞, ΓΕ.

Berlin [Pl. XV. 3]; E. T. N.

27. TETRADRACHM.

Obv.—Similar to the above.

Rev.—ΑΛΕΞΑΝΔΡΟΥ on right. Similar to the above.
In front: RUDDER and ☞. Beneath throne, Μ.

Vienna; E. T. N. [Pl. XV. 4.]

28. STATER.

Obv.—Head of Athene r. in crested Corinthian helmet adorned with coiled serpent. Athene's hair held back at neck by riband.

Rev.—ΑΛΕΞΑΝΔΡΟΥ on right. Winged Nike as on previous staters. In front: RUDDER and Π. Behind, Α.

E. T. N. [Pl. XV. 5.]

29. TETRADRACHM.

Obv.—Head of youthful Herakles as on previous tetradrachms.

Rev.—ΑΛΕΞΑΝΔΡΟΥ on right. Seated Zeus as on previous tetradrachms. In front: Rudder. Beneath throne, ΞΞ.

E. T. N. [Pl. XV. 6.]

SALAMIS.

SERIES I.

The staters of this series form a group of five varieties, at least three of which are bound together by identical obverse dies. That they all belong to a single mint is furthermore evident from their close community in style—a style, moreover, which is unlike that of any other of the Alexander issues, except the earliest of the staters already attributed to the neighbouring mint of Kition. The Nike on the reverses of these Salaminian staters stands on a base, and holds a naval standard, peculiar in that its crossbar is unusually thick, and its projections face downwards instead of upwards. In style this group of staters merges into the succeeding staters signed with the rudder symbol. All these staters are struck from adjusted dies (position ↑↑), a practice peculiar at this early time only to Cyprus and Phoenicia. As we possess ample Alexandrine coinages with fixed dies for all the principal cities of Phoenicia, Cyprus alone remains; while the attribution to this island is proved by the close similarity in style to the staters which for other reasons have been assigned to Kition.

The accompanying tetradrachms and drachms are all signed with the bow symbol only. At first their

style, like that of the Kitian Alexanders, is modelled after contemporaneous Cilician issues, but this is soon changed to a style which is very individual. The first, and perhaps the most convincing, grounds on which these coins are to be assigned to Salamis, is the striking similarity, in both appearance and detail, between the Herakles head of their latest issues and the Herakles head on the bronze coins published by G. F. Hill in the catalogue of the coins of Cyprus in the British Museum, Pl. XII, Nos. 20 to 23. These Alexander bronzes are proved by their provenance to be from Cyprus, and by the letters ΣA to have been struck at Salamis. Both the bronze and the silver coins are from adjusted dies (position $\uparrow \uparrow$), a custom, as stated above, peculiar at this period to Phoenician and Cypriote coinages only. Furthermore, we must not fail to notice a peculiarity in the reverse type of these bronze coins. As a rule on Alexander's bronze issues the unstrung bow is represented alongside of or *in* its case; here, however, the bow-case is unusually small, and is placed *within* the curve of the bow which is strung. This makes the bow a most striking and important feature of the type, consciously connecting it, to my mind, with the bow which is the constant adjunct symbol of the silver issues of this series. The bows of both the silver and the bronze coins are strung, and are of identical shape.

SERIES II.

Under this series have been collected all the staters with the rudder symbol²¹ in the field. Some of them

²¹ Recently one of these staters, for other reasons, has been attributed to Cyprus by E. J. Seltman, *Num. Zeitschrift*, 1913, p. 209.

may very well have been struck during the period of Series I, as their style is at first a close development of the latest of the previous staters. The inscriptions, as before, still read **ΑΛΕΞΑΝΔΡΟΥ**.

The silver issues of this series also are marked with the rudder symbol, but the inscriptions are in honour of Philip III. In the Cilician series this change was made but a short time before the latter's death, at Sidon the change was introduced in 320 B.C., at Arados about the same time; therefore it seems best to date our Salamis **ΦΙΛΙΠΠΟΥ** issues sometime between 320 and 317, the date of Philip's death. The style of these silver coins is very similar to the latest issues of Series I. During the course of this issue, however, the Herakles head becomes in style what Müller calls "style IV"—a similar change is found in the Alexanders struck at Kition at this time. The curious and unusual placing of the inscription—the two words **ΒΑΣΙΛΕΥΣ** and **ΦΙΛΙΠΠΟΥ** being written in parallel lines behind the Zeus figure—is worthy of particular notice.

Whereas it would perhaps be somewhat bold to assert that the bow was the symbol of the Salamis mint during the period 332 to 320 B.C. (in view of the fact that no less than five different symbols, including the bow, appear on the gold coins at that time), the rudder, on the other hand, seems almost certainly to have been considered the "type parlant" of this mint, and was so used on its coins. The rudder as a symbol would be most appropriate to Salamis, the capital and administrative centre of the island of Cyprus under Ptolemy, a city of considerable commercial importance, the possessor of a fine fleet of its own, and probably the naval base of the Egyptian flotilla. The rudder hence-

forth appears continually on all the Alexander issues of the city under Ptolemaic supremacy, while monograms are used for the control of the coinage.

SERIES III.

This series is introduced by the tetradrachm, No. 15 (Pl. XIV. 7), which constitutes the transition between Series II and III. In style it is closer to the coins of Series III, but in the placing of the inscription **ΑΛΕΞΑΝΔΡΟΥ ΒΑΣΙΛΕΩΣ** it resembles the tetradrachms of Series II. The stater which is placed with it may still belong to Series II. In style it is identical with certain specimens of No. 11 (compare Pl. XIV. 3), but in the magistrate's name in the field it has more affinity with the staters of the present series.

This series consists of staters, tetradrachms, and drachms in considerable abundance, all bearing the mint-mark rudder, and, in addition, two monograms. As these monograms are constantly changing they must denote the magistrates in charge of the coinage, though it would be tempting to see in **NK** and **M** or **Μ** the respective names of Nikokreon²² and Menelaos.²³ Alongside of these Alexander coins it would seem that Nikokreon also struck the well-known staters and Rhodian didrachms and drachms bearing his own name and types. These were probably intended for use in Cyprus only. There is nothing strange in the currency side by side of Attic tetradrachms and smaller

²² Until 310 B.C. king of Salamis.

²³ Strategos of Ptolemy in Cyprus, and successor to Nikokreon as king of Salamis and Governor of Cyprus.

denominations of Rhodian weight, as Cyprus had been accustomed to the latter system for many years on account of its close commercial relations with the great banking and trading centre of Rhodes. It has also been shown²⁴ that at this very time Ptolemy Soter was striking Attic tetradrachms and Rhodian drachms side by side in his mint at Alexandria. On the death or deposition of Nikokreon, about 310 B.C., Menelaos, the brother and strategos for Cyprus of Ptolemy, succeeded to the "kingdom". He too struck local gold coins in addition to the regular Alexander issues. It also seems likely that under his rule were issued the bronze coins which bear on their obverses the head of the Cypriote Aphrodite,²⁵ and on their reverses the Ptolemaic eagle and the inscription ΠΤΟΛΕΜΑΙΟΥ. A point of close similarity between these bronze coins and some of the Alexanders which we have assigned to Salamis is the unusual way in which the hair is held back at the neck by a single riband. Compare the stater No. 28 (Pl. XV, 5) with the above-mentioned bronze coins. This would constitute another proof of the Cypriote origin of these particular Alexander coins.

PAPHOS.

SERIES I. *Circa* 330 B. C.

1. TETRADRACHM.

Obv.—Head of youthful Herakles r. in lion's skin head-dress.

Rev.—ΑΛΕΞΑΝΔΡΟΥ on right. ΒΑΣΙΛΕΩΣ in exergue, Zeus enthroned l., holds eagle in outstretched r., and sceptre in l. In field: FLYING DOVE and so. Beneath throne, ε.

²⁴ Svoronos, *loc. cit.*, vol. ii. Nos. 33-55.

²⁵ *Ibid.*, Nos. 74-82.

Paris [Pl. XV. 7]; London (two); see *Catalogue of Greek Coins in the British Museum*, Cyprus, Pl. VIII, Nos. 12, 13; E. T. N.; Berlin.

2. DRACHM.

Obv.—Similar.

Rev.—ΑΛΕΞΑΝΔΡΟΥ on right. ΒΑΣΙΛΕΥΣ in exergue.
Similar to above. In field: FLYING DOVE.

Hague.

2 a. BRONZE, size I.

Obv.—Head of youthful Herakles r. in lion-skin. Border of dots.


Rev.—ΑΛΕΞΑΝΔΡΟ[Υ?] between bow in case and club.
Below: FLYING DOVE.

Jelajian, Cyprus.

SERIES II. Before 320 B.C.

3. TETRADRACHM.

Obv.—Head of youthful Herakles r. in lion's skin head-dress. Circle of dots. Style much finer than the preceding.

Rev.—ΑΛΕΞΑΝΔΡΟΥ on right. Zeus enthroned l., holds eagle in outstretched r., and sceptre in l. Lower limbs parallel and draped, feet rest on foot-stool. In field: . Beneath throne: ΒΕΕ.

Munich; E. T. N. [Pl. XV. 8.]

4. TETRADRACHM.

Obv.—Similar.

Rev.—Similar. In field: . Beneath throne: ROSE.

E. T. N. [Pl. XV. 9.]

5. TETRADRACHM.


Obv.—Similar.

Rev.—Similar, but no symbol beneath throne.

E. T. N. [Pl. XV. 10]; London.

6. TETRADRACHM.


Obv.—Head of youthful Herakles r. Some dies like the preceding others of a different style.

Rev.—ΑΛΕΞΑΝΔΡΟΥ to right of sceptre. ΒΑΣΙΛΕΩΣ to left of sceptre. Zeus enthroned as on preceding. In field: . Beneath throne: EAR OF CORN.

E. T. N. (first style); Yakountchikoff (second style).
[Pl. XV. 11.]

7. TETRADRACHM.

Obv.—Similar, but only of the second style.

Rev.—Similar. In field: . Beneath throne: LAUREL BRANCH.

London; Berlin; E. T. N. (formerly Egger Sale XL, May, 1912) [Pl. XV. 12]; Vienna; Naples; Petrograd.

8. TETRADRACHM.


Obv.—Similar.

Rev.—Similar. In field: . No symbol beneath throne.

R. Storrs. [Pl. XV. 13.]

9. BRONZE.

Obv.—Head of youthful Herakles r.

Rev.—ΑΛΕΞΑΝΔΡΟΥ between club and bow in case.
Below: .

Paris.

To Paphos, at this time third in importance of the cities of Cyprus, Hill has attributed an Alexander tetradrachm (No. 1) signed with the flying dove of Aphrodite and two Cypriote letters. As he shows,²⁶ this coin must have been struck in Alexander's lifetime; I would go further, and place it very early

²⁶ Hill, *loc. cit.*, lxxix, § 51.

(about 330 B.C.), on account of the odd style and the presence of Cypriote letters. Like the first issue at Kition with its **ΑΛΕΞΑΝΔΡΟ** inscription Cypriote mannerisms are still in evidence. The Hague collection also possesses a drachm of this issue, and Mr. Jelajian a bronze.

The next coins which must be assigned to Paphos are certain tetradrachms which occurred in the Demanhur Hoard, and which, like the contemporaneous coins of Kition, bear the city's initials in monogram in the field, in this case: **Π**. These coins are of very good and rather individual style—quite different from the issues of Salamis and Kition. These latter were more or less influenced by the coins of the Cilician and Phoenician coasts, and were invariably struck from adjusted dies. The Paphian coins, on the other hand, were at first struck from loose dies, the oriental custom of adjusted dies not being adopted till the appearance of Nos. 6 to 8 (Pl. XV. 11-13). These latter usually show the position $\uparrow\downarrow$ for their dies. In style these Paphian coins remind one most of the early Alexander issues of Western Asia Minor. In only one point do they betray their Cypriote origin, and that in the curious placing of the inscription **ΑΛΕΞΑΝΔΡΟΥ ΒΑΣΙΛΕΩΣ**, both words being in parallel lines, the first to the right, the second to the left, of the sceptre held by Zeus. This peculiar placing of the inscription is only to be found on the contemporary Alexander issues of Salamis and on a certain tetradrachm which, we shall see later, seems attributable to Marion. The clue to their origin being thus furnished by the inscriptions, the monogram **Π** easily resolves itself into **ΠΑΦ**. This reading is perhaps

corroborated by one of the coins in the writer's collection which has the letters ΠΑ roughly scratched by some idle hand into the surface alongside of the monogram in question. Of the four symbols to be seen beneath the throne of Zeus, the rose occurs as the reverse type on certain²⁷ autonomous bronze coins of Paphos of about this same period. It is curious to note that the symbol laurel branch occurs on the justly suspected tetradrachm (?) of Nikokles of Paphos in the Florence collection. Perhaps this latter specimen was an imitation of a genuine coin now lost?

MARION.

1. TETRADRACHM.

Obv.—Head of youthful Herakles r. Circle of dots.

Rev.—ΑΛΕΞΑΝΔΡΟΥ to right of sceptre. ΒΑΣΙΛΕΥΣ
to left of sceptre. Zeus enthroned to left, holds
eagle in outstretched right, sceptre in left. Feet
rest on foot-stool. In field: THUNDERBOLT.

London; E. T. N. [Pl. XV. 14.]

The placing of the inscription on this coin betrays its Cypriote origin. The style, though of lower relief, is not unlike some of the Paphian Alexanders, while the throne is identical in shape with that found on these latter. Judging from the issues of Salamis, Kition, and Paphos, the thunderbolt in the field would in this case be a mint and not a magistrate's symbol. The thunderbolt occurs only once as a type on the coins of Cyprus, namely on certain bronze coins of Marion struck in the reign of Stasioikos II (from

²⁷ Hill, *loc. cit.*, Pl. VIII, 11.

before 315 to 312 B.C.), on whose coins Zeus²⁵ is a common type. The mint of Marion would suit our coin very well. It has many affinities with issues of the near-by mint of Paphos, the Zeus thrones are identical in shape, the general styles are not unlike, and the dies were not at first adjusted as on the coins of Salamis and Kition.

The Alexander coinages which thus far we have been able to assign to Cyprus cover the period from the time when the island kings first offered their submission to Alexander, soon after the battle of Issos in 333 B.C., down to the loss of the island by Ptolemy Soter in 306 B.C. The coinages of Kition, Paphos, and Marion appear, indeed, to have come to an end before this latter date—a fact which coincides well with what we know of the island's history during this period. For in 313 B.C. we know that, owing to a sudden revolt of many of the Cypriote kings against his suzerainty, Ptolemy was obliged to invade Cyprus, and soon suppressed the disaffected kings—among whom Pumiathon of Kition and Stasioikos of Marion are expressly stated to have been. In 310 B.C. Nikokles of Paphos perished in a similar attempt to throw off the Egyptian yoke. Salamis, on the other hand, stood loyally by Ptolemy, and its king, Nikokreon, was awarded the governorship of the entire island. On his death Ptolemy's brother Menelaos, who as general of the Egyptian forces had assisted Nikokreon, succeeded him. Salamis continued throughout his reign to be the capital and administrative centre of the island.

²⁵ In the environs of Marion there was a grove sacred to Zeus. Strabo, xiv. 6, 3.

It is therefore not surprising to find its mint in active operation down to the great naval battle and siege of Salamis, in which Demetrios Poliorketes finally worsted the Ptolemaic forces, and obliged them to evacuate the island.²⁹

E. T. NEWELL

²⁹ Under Antigonid rule the island formed a very important naval base of their empire until its reconquest by Ptolemy in 295 B.C. Antigonos, and later Demetrios, no doubt issued many coins, probably from the mint at Salamis. If so, the types must at first have been the usual Alexandrine; the inscriptions, too, were in honour of the Macedonian hero. As yet, however, the attribution of certain of such coins which might belong to this time and place is too doubtful to be hazarded here.

XII

SOME RARE AND UNPUBLISHED ROMAN COINS IN MY COLLECTION.

(PLATE XVI.)

HAVING acquired in the course of the formation of my collection of Roman coins a certain number of unpublished pieces, and also some which, although recorded, are stated to be in foreign collections not easy of access, I thought it might be of interest to the Society to give a list of such coins together with some remarks and suggestions in connexion with them. In speaking of unpublished coins I refer to any that are not recorded in the second edition of Cohen, that being the latest and most complete record of all the known coins of the Roman Empire. At the same time I am aware that he has failed to notice a few coins of which mention is made by much earlier writers, and in any cases of this sort I shall endeavour to mention the circumstances. Although with such a subject it is not possible to give a very consecutive series, I shall describe the coins in the order in which they come as to reigns and dates, and will begin with some of the Emperor Augustus.

The first to be mentioned is a piece struck from the dies of the *as* of the monetary triumvir C. Cassius Celer,¹ on a large flan (Pl. XVI. 1). The coin is

¹ *B. M. C.: Rom. Rep.*, ii, p. 59, Pl. lxx, 6.

perfectly circular, and there is a broad plain band outside the legend with a raised marginal line close to the edge. This outer band and margin have apparently been turned.² The legends are the usual ones for this moneyer: *Obv.* CAESAR AVGVSTVS TRIBVNIC POTES; bare head of Augustus to right: *Rev.* C. CASSIVS CELER III VIR A.A.A.FF; large SC in centre. The weight is 302 grs., its module is size 10 according to Mionnet's scale (33.5 mm.). In connexion with this piece I describe another also in my collection, and equally exceptional. It is by the same moneyer, and also as regards type it is the same as the ordinary *as*, although it is rather larger. It is, however, of yellow brass or aurichalcum. It is perfectly circular, and it also has a turned margin, not so broad as the first piece described, but with a hollow grooved edge. The legends are the same as those of the first piece. The weight of this coin is 188 grs., and the module is size 8½ (29 mm.).

In *Num. Chron.*, 4th series, vol. iv, Mr. Grueber, in a paper on the bronze coinage of Rome of this period, says that the sestertius and the dupondius were struck in aurichalcum, while the *as* was in copper, and was the only denomination on which the portrait of Augustus appeared, the type of the dupondius being invariably the wreath with the Emperor's name. I see no reason for disagreeing with this general rule, although the two pieces I have described are exceptions to it, and the question arises as to what they were intended for. My own suggestion is that they

² Cp. the Vienna coin of M. Maecilius Tullus (Willers, *Gesch. röm. Kupferpr.*, p. 152, No. 217), or that of Salvius Otho (*ibid.*, Pl. xvii, 2), or that of Gallius Luperus (*ibid.*, Pl. xiv, 4).

were early attempts at placing the portrait of Augustus on a larger and higher valued coin than the common *as*. The coin in aurichalcum is larger, and the portrait is better executed than on the *as*, and the metal together with its size would make it of the value of the dupondius. Owing to patination it is not possible to ascertain readily the metal of the first piece, but I suspect it to be copper, and if it is so, it would be a dupondius in this metal, as the value of copper was only about half that of aurichalcum. We may thus perhaps have two varieties of the experiment I suggest.

Another not improbable solution of the question is that these pieces are some of the earliest examples of the Emperor's image, struck specially for enclosing in larger circles for the military standards. The peculiar edges so perfectly circular are, I think, in favour of this suggestion. In later reigns, and before the period when the regular medallions were used for this purpose, there are examples of ordinary bronze coins enclosed in broad outer margins of bronze that were evidently so employed.

In pursuance of my first suggestion I will here describe two coins, both of which are very rare, although only one of them is not in Cohen.

1. *Obv.*—CAESAR AVGVSTVS TRIBVNIC POTEST
Bare head of Augustus to right.

Rev.—C. PLOTIVS RVFVS III VIR A.A.A F.F;
large SC in centre.

Wt. 380 grs. Cohen, No. 503.

2. *Obv.*—CAESAR AVGVST PONT MAX TRIBVNIC
POT; head of Augustus to left. Behind, a
figure of Victory with the right hand placing

a laurel wreath upon his head, and in the left holding a cornucopias; beneath the bust is a globe.

Rev.—M. MAECILIVS·TVLLVS·III VIR·A·A·A·F·F·; large SC in centre.

Wt. 360 grs. Size $9\frac{1}{2}$ (33 mm.).

This coin is not in Cohen of this size, although there is a specimen in the British Museum³ from the Thomas Collection, weighing 381 grs., and described by Mr. Grueber in the paper previously referred to. The writer there describes this coin as a sestertius, and one of much lighter weight (258 grs.), of the moneyer M. Salvius Otho, he also calls a sestertius, owing to its module which quite justifies it. In pursuance of my suggestion that these were tentative endeavours, if nothing more, to place the portrait of Augustus in a larger and more important manner upon the Senatorial bronze coinage of Rome as his power became more absolute, I suggest that the two coins last described, together with those described as sestertii by Mr. Grueber, are really dupondii in copper. Although neither of my own coins can without injury be proved to be in copper, I have seen a specimen of the Plotius (Cohen 503) piece, which owing to a cut could be clearly seen to be of copper, and the specimen in the British Museum of the Maecilius coin, which is very slightly patinated, has every appearance of being of copper. If, as I am convinced, these coins *are* of copper, they would only be of about half the value of the sestertii of aurichalcum, and of the same value as the dupondii

³ *B. M. C.: Rom. Rep.*, ii, p. 105, No. 4682. Willers, *op. cit.*, No. 217, describes fifteen specimens of various sizes and weights, of which the Brit. Mus. specimen is the heaviest.

of about half their size, in the same metal. The reason for their being struck may however be, as I suggest, a tentative effort to place the portrait of Augustus on Senatorial coins of the largest size without actually encroaching upon the then severe Republican type of the sestertius.

The monetary triumvirs who struck the coins with the head of Augustus crowned by Victory are M. Salvius Otho, M. Maecilius Tullus, and P. Lurius Agrippa, and M. Babelon puts their year of office at 12 B.C., as in this year Augustus received the title of Pontifex Maximus, which appears upon all these coins. Mr. Grueber, however, puts their date as 5 B.C., as he has reason to believe that other moneyers, on whose coins this title appears, held office before the three who struck the coins in question. Perhaps, however, the most interesting suggestion is made by Willers.⁴ He describes them as triumphal asses, struck for 1 Jan., 7 B.C. He notes (pp. 175-6) that they frequently exceed the normal size and weight of the *as*, and that one at Berlin has remains of ancient gilding. The obverse type suggests that they were struck specially to celebrate a triumph, and he comes to the conclusion that of the three possible triumphs that of 1 Jan., 7 B.C. is the most probable. I may observe that my own suggestion made above is in no way incompatible with this view, if we may regard these triumphal coins as dupondii as well as asses.

In making the suggestions as to copper dupondii I should perhaps say that I have not overlooked the fact that the ordinary sestertii of the reign of

⁴ *Op. cit.*, pp. 152-3.

Augustus, with the wreath and palm branches, were not issued by the three moneyers who struck the type of the Emperor crowned by Victory. Probably, however, none were wanted, as those and the dupondii, struck by previous moneyers, must have been very abundant, seeing that even now they are quite common.

It is possible that some of the larger and heavier specimens of the coins of M. Salvius Otho of this type⁵ may be really sestertii, and that even this denomination may have been tentatively issued. The metal, however, would be the real test.

The next coin of Augustus that I will describe is one that for size should perhaps be called a medallion. It is of the "Altar of Lyons" type,⁶ but on the obverse the head is to the left, which does not occur on any large brass of this type mentioned by Cohen. It may be described as follows:

Obv.—**CAESAR AVGVSTVS DIVI F PATER PATRIAE**; laureate bust of Augustus to left of fine execution.

Rev.—**ROM ET AVG**; the usual "Altar of Lyons".

Wt. 444 grs. Size 11 (36.5 mm.). [Pl. XVI. 2.]

This coin is quite round and carefully struck. Cohen describes a piece of this reverse type (No. 239) of size 11 as a medallion. It differs, however, from mine in having the head to the right, and the legend **CAESAR PONT MAX.**

The last coin I have to mention of Augustus is

⁵ See Willers, p. 153, No. 218.

⁶ See *B. M. C.: Rom. Rep.*, ii, pp. 439 f.

an unpublished sestertius, presumably struck under Tiberius.

Obv.—**DIVVS AVGVSTVS PATER**; radiate head of Augustus to left.

Rev.—**S. C.**; Victory flying to left holding a buckler upon which is **SPQR**.

Wt. 347 grs. Size 10.

This coin is of exactly the same type as Cohen, No. 242, in "second brass", but the whole is on a larger scale. The weight is a little light for a sestertius, but not much, and is far too heavy for a dupondius. A similar specimen was in the E. F. Weber Collection.⁷

After Augustus I have nothing remarkable until the reign of Nero. The first piece to mention is what I believe to be a unique medallion, weighing 1563 grs., or practically four sestertii. It has apparently been long in water, and has suffered much from attrition in the manner often to be observed in coins washed up by the sea, or found in running water. It is of the Port of Ostia type, and may be described as follows:

Obv.—**NERO CLAVDIVS CAESAR AVG GER P. M. TR. P. IMP. P. P.**; laureate head of Nero to right.

Rev.—**AVGVSTI** above, **POR OST** below (probably between **S. C.**). The port of Ostia with nine vessels, the statue of Neptune on a pedestal above, and recumbent figure of the Tiber below.

Wt. 1563 grs. Size 13½ (46 mm.). [Pl. XVI. 4.]

This piece exactly reproduces on a larger scale the

⁷ Hirsch, *Katal.* xxiv, Taf. v. 842 (34 mm.).

details of most of the sestertii of the same type, except that the temple usually found at the end of the quays on the left side is not shown. I believe that on some sestertii the temple does not appear, and possibly it may not have been built till after the inauguration of this great work. The Port of Ostia type is one of those that appear to have been struck almost, if not quite, throughout the reign of Nero, and those struck after its erection are no doubt those that show the temple. In the *Numismatic Chronicle* for 1841 (vol. iv, p. 156) Mr. Roach Smith, in describing a quantity of Roman coins found in the Thames on the site of Old London Bridge, amongst which were several medallions, suggests the probability that many of the coins, and particularly the medallions, were thrown in as votive offerings at the inauguration of the bridge or ferry that existed in Roman times, or when from time to time it was repaired. In the same way I venture to suggest that the piece I now describe may be one of a number specially struck for casting into the water as votive offerings at the inauguration of the Port of Ostia. Its condition points to the action of the sea, and it may have been cast ashore or dredged up long ago.³

³ This coin of Nero in its present worn condition shows every sign of genuineness, but perhaps it is desirable to mention that in size it recalls certain "medallions" which have long been recognized as forgeries; of these the British Museum possesses two. The first is of Caligula and his three sisters: *Obv.* as Cohen,² i, p. 237, No. 3, but head bare; *Rev.* as No. 4; size 50 mm.; weight 1762 grs. The second is of Claudius and Nero Drusus: *Obv.* and *Rev.* as Cohen,² i, p. 254, but reading **AVGIMPPMTRP** instead of **AVGPMTRP IMP P P**; size 50 mm.; weight 1764 grs. The style of these is, however, inferior, and it is easy to recognize them as forgeries. Their weight is also excessive for four sesterces.

The next coin to which I will allude is quite as remarkable, and has the advantage over the last of being in very fine condition. It is a sestertius of medallion size of a remarkable and quite unpublished type. It may be described as follows:

Obv.—IMP NERO CLAVD CAESAR AVG CERM
TRP XIV P·P.; draped bust of Nero to left
crowned with a remarkable wreath of serrated
and plain leaves.

Rev.—No legend. Victory winged and draped hastening
to right, in her right hand she holds a tall
palm branch, and in her left outstretched she
supports on a stand a small helmeted figure
of Pallas with javelin and shield. In the
field S·C.

Wt. 472 grs. Size 11 (39 mm.). [Pl. XVI. 5.]

This coin is remarkable not only as being a newly discovered type of reverse, but in various other ways. The bust of Nero is the only draped example I know of, the portrait is more pleasing than usual, and the wreath is very exceptional. The date is also a special feature, for TR·P·XIV· is the last year of Nero's reign, and this date has been said not to be known on his coins, although Mr. Hobler claimed to have one with the cuirassed bust reading TRP XIII. As TRP XII and XIII of this latter type are known, although very rare, there *may* have been a mistake if the coin was not in good condition.

The reverse type of Victory is also remarkable, and calls for explanation. The date TR·P·XIV places the coin at probably the end of A.D. 67, when nothing in the shape of a military victory is recorded. Nero had just been engaging in the various athletic and musical contests of Greece, and was proclaimed victor greatly

to his own satisfaction ; and his preference for recording on his coins triumphs of this nature rather than political achievements is to be remarked on such types as the Decursio, Nero as Apollo, and the Quinquennial games. According to Suetonius, *Nero* c. xxv : 'on his return from Greece, arriving at Naples, because he had commenced his career as a public performer in this city, he made his entrance in a chariot drawn by white horses through a breach in the city wall, according to the practice of those who were victorious in the sacred Grecian games. In the same manner he entered Antium, Alba, and Rome. He made his entry into the City riding in the same chariot in which Augustus had triumphed, in a purple tunic, and a cloak embroidered with golden stars, having on his head the crown worn at Olympia, and in his right hand that which was given him at the Pythian games ; the rest being carried in a procession before him, with inscriptions denoting the places where they had been won, from whom, and in what plays or musical performances' According to Merivale this pageant took place either in December 67 or January 68. Mr. G. F. Hill believes that he recognizes in the composition of the wreath worn by Nero the bay, olive, and pine respectively representing the Delphian, Olympian, and Isthmian games, and it seems highly probable that my coin commemorates his return from Greece, and the extravagant pageants accompanying it. I am indebted to the Rev. E. A. Sydenham for the foregoing suggested explanation of this remarkable type. During his visit to Greece Nero was present at Delphi and the Isthmus, as well as at the Olympian games.

The coin was, I believe, found in Rome itself within

quite recent years, and is probably unique, as, if my suggestions regarding it are correct, possibly few if even any others were struck. Its size, roundness, and careful striking and fine condition may indicate that it was in the nature of a pattern piece, and it is a coin that I have much satisfaction in bringing to the notice of the Society.

Another apparently unpublished coin of Nero to which I can draw attention is an *as* with the reverse type of Neptune standing, similar in all respects to that on the coins of Agrippa, although the work is of a different and superior style. It may be described as follows :

Obv.—**NERO CLAVDIVS CAESAR AVG GER ;**
laureate bust of Nero to right.

Rev.—Neptune standing to left with trident in left hand and dolphin in right, a mantle hanging behind from the two arms. **S.C.** in field.

Wt. 148 grs. [Pl. XVI. 3.]

This coin, although of the Agrippa type, is not a mule, as the work is of the time of Nero. It is also to be noted that Cohen quotes examples of two "second brass" coins of Nero (presumably asses) with Augustan type, No. 255, *Rev.* **PROVIDENT S.C.** altar, and No. 256, **ROM ET AVG.** These, together with my coin, appear to show a tendency at a certain period of Nero's reign to revive well-known types associated with the reign of Augustus, and it would be interesting if a reason could be assigned for this.

Of the reign of Galba I have two sestertii of interest. One is according to Cohen's valuation the rarest type of Galba, while the other is unpublished, and is closely connected with the former by portrait

and legend. The first is the sestertius with the reverse **XXXX REMISSA** and the so-called triumphal arch; a type which has been discussed by Mowat⁹ and Gneecchi,¹⁰ and into the meaning of which I need not enter here.

In October, 1913, Mr. H. Mattingly read a paper before the Society in which he gave reasons, with which I concur, for ascribing these coins to the Lyons mint, but in the paper as published in the *Numismatic Chronicle* of 1914 I rather regret to see no mention of the point, as the second coin to which I now have to call attention is so evidently from the same mint that additional interest would be given to the suggestion. It may be described as follows:

Obv.—**SER GALBA IMP CAESAR AVG PM**;
laureate bust of Galba to right with small globe at the point of the truncation.

Rev.—**VICTORIAE IMP GALBAE AVG**; Victory to right, inscribing **SPQR** upon a buckler which she rests upon an altar or cippus. There is no **S·C** upon this coin.

35 mm. [Pl. XVI. 6.]

It is to be regretted that this coin leaves so much to be desired as to preservation, seeing that it is a hitherto unrecorded type. The head of Galba and the obverse legend are so exactly similar to the last coin described that there can be no doubt as to the dies being from the same hands. The portrait is rather unlike that on most sestertii of Galba, and if, as I think Mr. Mattingly rightly suggested, it marks the character of work of the Lyons mint, it is useful to

⁹ *Rev. Num.*, 1909, pp. 79 ff.

¹⁰ *Riv. Ital.*, 1914, p. 174.

have the evidence, of another type with the same portrait. The absence of the S·C· is remarkable, and may point to its having been struck by Galba's authority after his acceptance of the invitation of Vindex to assume the Imperial power, and before his recognition by the Senate.

FREDK. A. WALTERS.

XIII

HOARD OF NINE ANGLO-SAXON PENNIES FOUND IN DORSETSHIRE.

(SEE PLATE XVII.)

THIS hoard was unearthed in Dorsetshire a few years ago, and the person who acquired it from the actual finder stated that the latter assured him that these nine coins comprised the entire find, and that they were discovered lying together in a depression or cavity in the solid chalk. It is said that there was no sign of any kind that they had been contained in either a bag or other receptacle.

Coenwulf of Mercia [A. D. 796-822].

1. Penny, *Obv.*—diademed bust to right, legend commencing at top, + **COENVVLF RE** + **ᛞ**. *Rev.*—within a circle a cross moline + **ᛞBᚱ TONETᚱ**
Wt. 20.1 grs.
2. Penny, *Obv.*—diademed bust to right, legend commencing behind head, + **COENVVLF REX** + **ᛞ**. *Rev.*—within a circle, a cross with V-shaped ends, a pellet in each angle. + **SVVEFHERD MONETᚱ**
(Rud., Pl. vi. 13). Wt. 20.3 grs.
3. Penny, *Obv.*—diademed bust to right, legend commencing behind head, + **COENVVLF RE** + **ᛞ**. *Rev.*—within a circle, four crescents turned outwards each enclosing a pellet, in the centre a pellet, + **DELLᚱ MONETᚱ** (Rud., Pl. vi. 15, var.).
Wt. 21.7 grs.

Ecgbeorht of Wessex [A. D. ? 814-39].

4. Penny, *Obv.*—small bust to right, + **HECBEORHT REX.** *Rev.*—within a circle, a cross crosslet, + **DIORTOD TNEȚ** (Rud., Pl. xiv. 1, var., *B. M. Cat.*, type IV). Wt. 19.9 grs.
5. Penny, *Obv.*—diademed bust to right, + **ECCBEORHT REX.** *Rev.*—within a circle a cross potent, + **DYNYN TONETΠ** (*B. M. Cat.*, type V). Wt. 21.7 grs.
6. Penny, *Obv.*—circle enclosing a cross potent + **ECC BEORHT REX.** *Rev.*—circle enclosing a tribrach potent, a pellet above + **BEΠCTYD TONE** (*Obv. B. M. Cat.*, type XIII, unpublished type of reverse). Wt. 19.6 grs.
7. Penny, *Obv.*—circle enclosing a cross pattée + **ECC BEORHT REX.** *Rev.*—circle enclosing a sun of six rays pattée of equal size, + **OBΠ TONETΠ** (*B. M. Cat.*, type XV). Wt. 19.8 grs.

Wulfred, Archbishop of Canterbury [A. D. 805-33].

8. Penny, *Obv.*—tonsured head facing, completely within a circle, + **VVLFRED ARCHIEPIS.** *Rev.*—**DRȪR CITS** in two lines with a circle; a pellet in centre, + **SVVEFHERD MONEȚ** around (*Num. Chron.*, 1904, p. 458). Wt. 22 grs.

Sede Vacante (?).

9. Penny, *Obv.*—tonsured head facing, completely within a circle, + **SVVEFNERD MONETΠ.** *Rev.*—
• + • **DOROVERNIA CIVITA.S.** in five lines across field (*Obv. Rud.*, Pl. xiii. 4; *Rev. Rud.*, Pl. xiii. 3). Wt. 20.50 grs.

Although the find consisted of only nine coins, it presents several peculiar and interesting features and I therefore venture to call attention to the following points, which appear to me to be of special interest.

First, it is remarkable that all the coins are different in type from one another; *secondly*, they were all struck by Kentish moneyers (four of them having worked for Baldred, King of Kent), and, *thirdly*, an entirely new type of Ecgbeorht's coinage is added to those already published. The coins in question are now in my cabinet.

COENWULF of Mercia (A.D. 796-822) is represented in the hoard by three pennies, all of which have the bust on the *obverse*, but with the *reverses* all different in type; that with the four crescents curved outwardly, with the addition of a pellet in each [Pl. XVII. 3], is an unpublished variety. The three coins are struck by different moneyers. DEALLA, the originator of the unpublished variety, coined for Ecgbeorht but not for Baldred. He may possibly have been the same person as *Dealing* who coined for Ceolwulf I (A.D. 822-3 or 4). Pennies with very similar reverses were also struck for Coenwulf by Tidbearht (Rud., Pl. vi. 15), Werheard and Diormod, for Coenwulf and Ceolwulf I by Ealhstan (Rud., Pl. vii. 1; Hks., fig. 72), and for Ecgbeorht by Dynyn (Rud., Pl. xiv. 4). *Diala* occurs as a moneyer of Archbishop Ceolnoth (A.D. 833-70).

Oba [Pl. XVII. 1] was also a moneyer of Ceolwulf I, Baldred, and Ecgbeorht. He also struck so-called *Sede Vacante* coins with the regal head. The cross moline reverse was employed by Diormod on Coenwulf's coinage (Rud., Pl. vi. 7).

SWEFHEARD, who struck the coin illustrated [Pl. XVII. 2], also coined for Baldred, Ecgbearht, Archbishop Wulfred, and both types of the so-called *Sede Vacante* pennies.¹

ECGBEARHT of Wessex (A.D. 802-38 or 9) is represented by four pennies, each by a different moneyer, and all differ in design both in respect of *obverse* and *reverse*. Two are with the king's bust.

The bust on the coin struck by DIORMOD [Pl. XVII. 4] closely resembles in style the bust on Baldred's pennies, and it is strange that Baldred (A.D. 807-25) is not represented in this find. It will be noticed that the name is spelt **HECBEARHT**. It is believed to be an unpublished type for this moneyer, but a coin with the same *obverse* and *reverse* by Sigestef is illustrated in Rud., Pl. xiv. 1. On it the king's name is spelt **ECGBORHT** and **MNET** is omitted.

DIORMOD also coined for Coenwulf and Baldred. He also struck the *Sede Vacante* type with the regal head, and is in the list of those moneyers who coined Ecgbearht's issue which has the Canterbury monogram on the *reverse*.

The other penny with Ecgbearht's bust [Pl. XVII. 5] is struck by DYNYN, who was also a moneyer of Baldred. *Dun* and *Dunnic* occur as moneyers of Coenwulf and Ceolwulf I respectively. It will be

¹ It is curious that the coin of Coenwulf of the type illustrated in *B. M. Cat.*, vol. I, Pl. viii. 19, is absent from the hoard. This was certainly current at Coenwulf's death, as his moneyer Wodel used the identical reverse on a penny of his successor Ceolwulf I. Possibly the explanation is that Wodel was a Mercian craftsman, and the coins struck by him and other Mercian moneyers were not in common circulation in Kent. I suggest that the person, who originally lost or hid this hoard, was a man from Kent, or had Kentish associations.

seen that the coin in the hoard differs from that illustrated in Rud., Pl. xxvii. 1, by the legend on the *obverse* commencing behind the bust instead of beneath it.

DYNYN also struck pennies with bust on the *obverse*, and four crescents turned outwardly on the *reverse*. The cross-potent reverse design was also used by the moneyers Ethelmod and Beagmund on Ecgbeorht's pennies without bust.

ONA, the moneyer of the penny illustrated on Pl. **XVII. 7**, issued another type for Ecgbeorht, which had the cross pattée design both on the *obverse* and *reverse*, and his name is also in the list of known moneyers of the Canterbury monogram *reverse*, but none of his coins are published with bust but without monogram. As before stated he was a moneyer for Coenwulf, Ceolwulf, and Baldred.

The last of Ecgbeorht's pennies in the hoard is that of BEAGMUND [Pl. **XVII. 6**]. It is a remarkable coin, as the *reverse* type is an entirely new device, which may have some special religious significance. It is a cross potent of three limbs or 'tribrach potent', the upper limb of the cross being substituted for a pellet. [The Ecgbeorht Penny illustrated in *Num. Chron.* Series 4, vol. VIII, Pl. xvi. 13, is also an example of the intentional omission of the upper limb of the cross.]

The view put forward by the late Sir John Evans that the tribrach, symbolical of the Trinity and derived from the Archbishop's pall or pallium, was used to denote coins struck at the Canterbury mint, is now generally accepted by numismatists. Those of Ecgbeorht's coins that have the tribrach either in

simple or compound form are believed to have been struck there.

Sir H. H. Howorth is in doubt as to whether Beagmund was a moneyer of Canterbury or Rochester (*Num. Chron.*, as above), but the discovery of the coin under discussion may settle the point that he worked at Canterbury, and perhaps at Rochester as well.

BEAGMUND occurs on two other types of Ecgbeorht, viz., *B. M. Cat.*, type XIII, with a cross potent on either side (also used by the moneyer Ethelmod), and *B. M. Cat.*, type XIV, with interlaced A's on *obverse*, and a cross potent on *reverse* (unique). BEAGMUND does not appear to have struck any pennies for Ecgbeorht with the bust, and he is not among the moneyers who struck the monogram type, which Sir H. Howorth considers was Ecgbeorht's latest issue. This is remarkable inasmuch as Beagmund struck no less than six different types for Ecgbeorht's son and successor, Æthelwulf. Beagmund did not coin for any of Ecgbeorht's contemporaries in Mercia or Kent.

The two remaining coins of the hoard are the WULFRED and so-called *Sede Vacante* pennies (ton-sured head type), both of which are by the moneyer SWEFHEARD, to whom reference has already been made.

Mr. Lawrence has suggested that the issue of so-called *Sede Vacante* coins took place not later than A.D. 825, when Ecgbeorht in August of 825 defeated Beornwulf of Mercia at the battle of Ellandune and immediately (or on the authority of Roger of Wendover in A.D. 827) followed up his victory by driving Baldred from Kent.

Wulfred was consecrated Archbishop of Canterbury on the death of Athelheard in 805, and held the see

until his death in 832, and is said to have been a native of Kent. His penny [Pl. XVII. 8], in the Dorset find, has on the *reverse* DRŪR CITS (*Dorovernia Civitas*) in two lines across the field, and SWEF HEARD MONET round it, and is identical in type with Baldred's penny (Hks., fig. 57) by the moneyer DIORMOD. The latter, Hawkins says, 'is the earliest known coin with name of the Canterbury mint'. It is clear that it and Wulfred's penny were contemporary. The introduction of the name of *Dorovernia* and the tonsured head indicates a scholarly influence, and the suggestion that it was the archbishop who was the inventor, and that the *reverse* of Baldred's coin was copied from Wulfred's and not *vice versa*, should not be dismissed lightly.² Perhaps also Ecgbearht, at a later date, was indebted to the archbishop for the prototype of his monogram coinage.

In fixing a date for the burial of the hoard, the scanty particulars we have relating to this period of our history make it difficult to assign one with certainty.

As the find contains as many as three pennies of Coenwulf, and on the other hand none of Ceolwulf I or Beornwulf, it would lead to the assumption that it was deposited prior to or about the date of Coenwulf's death (A.D. 822). Sir Henry Howorth, however, in

² Reference to Rud, Pl. xiii. 3 (Wulfred), and Rud, Pl. xiii. 4 (uncertain).

Hks., fig. 144 (Wulfred), and Rud., Pl. xiii. 3 (uncertain), prove that the pennies with Wulfred's name were struck before the *Sede Vacante* series. It is obvious that the latter were copies from the former, as to suggest the contrary necessitates the impossible proposition that the moneyers on their own responsibility introduced at Canterbury the innovation of coins with the archbishop's bust.

two very able papers upon the coinage of Ecgbeorht and his sons (*Num. Chron.*, Series 3, vol. XX, and Series 4, vol. VIII), puts forward powerful arguments to show that the coinage of Ecgbeorht, after his return from exile in France, did not begin until about the year 825, when he first conquered Kent. As already mentioned, the Dorset hoard contained pennies of Ecgbeorht struck by the moneyers Diormod, Dynyn, and Oba, who were all moneyers of Baldred, and it seems impossible to conceive that Baldred would have allowed Ecgbeorht to employ these moneyers whilst he was himself on the throne of Kent. It was only after his expulsion that Ecgbeorht could make use of their services, the relationship (political and fiscal) between the rulers of Mercia and Kent being on a very different footing from that between Kent and Wessex. Consequently, I suggest that the hoard was hidden in A.D. 825 or a little later.

R. CYRIL LOCKETT.

TABLE OF MONEYS

Moneys	Cuenwulf 790-822	Coolwulf I 822-4	Baldred 806-25	Egbeorht with bust	Egbeorht without bust	Egbeorht monogram	Wulfred 805-32	Wulfred monogram	Sein Vacante tensured head	Sein Vacante regal head	Ceolnoth
Dealla	⊗ ¹	Dealing	—	—	—	x	—	—	—	—	Diala
Oba	⊗	x	x	—	⊗	x	—	—	—	x	—
Sweheard	⊗	—	x	—	x	x	⊗	x	⊗	x	Sweheard
Beagmund	—	—	—	—	⊗	—	—	—	—	—	—
Diormod	x	—	x	⊗	x	x	—	—	—	x	—
Dynyn or Dunyn	Dun	Dunn	x	⊗	—	—	—	—	—	—	—

¹ In Dorset hoard.

XIV.

THE PYX TRIALS OF THE COMMONWEALTH, CHARLES II AND JAMES II.

It was not until eight years after the death of Charles I that the moneys struck in the Commonwealth mint were formally tested. On 9 November, 1657, Oliver Cromwell, then Lord Protector, issued a warrant directing that an assay should forthwith be made at his palace of Westminster. I read in the *Memorials of the Goldsmiths Company* that the Pyx jury attended at the usual place near the Star Chamber on 14 November, 1657, but the indented standard pieces of gold and silver (as delivered to the Council of State on 22 November, 1649) were not produced. Accordingly the jury was dismissed, with instructions to appear again on that day fortnight, and meanwhile inquiry was to be made for the missing standard pieces.

The details which follow are extracted from Exchequer accounts, Q.R., Proceedings on trial of the Pyx, bundle 3, vols. 2 and 3.

3 December, 1657. Assays and trial of the moneys coined within the Tower between 9 November, 1649, and the day of trial, in accordance with an indenture dated 27 July, 1649, and made between the late Keepers of the Liberty of England by authority of

Parliament and Aaron Gourdain, doctor of physic and master-worker of the mint.

Gold of 22 carats fine, the privy mark being the Sun, was taken out of the pyx, and consisted of unites, double-crowns, and crowns, amounting in coined moneys to £137.

Silver moneys, with the same mark, consisted of pieces of 5*s.*, 2*s.* 6*d.*, 1*s.*, 6*d.*, 2*d.*, 1*d.*, and $\frac{1}{2}$ *d.*, amounting to £737.

Oliver Cromwell's coins of 1656 were presumably not included in this pyx, as its contents bore the Commonwealth privy mark only.

CHARLES II.

Shortly after the Restoration, standard trial pieces were again prepared by a jury of goldsmiths, who reported on 19 October, 1660, as to the accurate adjustment of three standards, viz. gold of 23 carats $3\frac{1}{2}$ grs., gold of 22 carats, and silver. Each of the pieces was divided into six indented portions which were distributed to the warden and the master-worker of the mint, the wardens of the Goldsmiths Company, and the Treasury of Receipt of the Exchequer, for the testing of the king's money.

9 July, 1663. Assays and trial of moneys coined within the Tower between 20 July, 1660, and the day of trial, in accordance with an indenture dated 20 July, 1660, and a warrant dated 19 January, 1662, for the striking of groats and threepences which were not ordered by the indenture.

Gold of 22 carats fine, the privy mark being the

Crown, was taken out of the pyx and consisted of unites, double-crowns, and Britain crowns, amounting in coined moneys to £52.

Silver moneys, with the same mark, consisted of pieces of 2*s.* 6*d.*, 1*s.*, 6*d.*, 4*d.*, 3*d.*, 2*d.*, 1*d.*, and $\frac{1}{2}$ *d.*, amounting to £615.

The pyx which was opened at this trial must have contained both types of the hammered gold coins and the three main types of the hammered silver coins.

4 July, 1664. Assays and trial of moneys coined between 6 February, 1662, and the day of trial, in accordance with the indenture of 20 July, 1660.

No gold coins in this pyx.

Silver coins consisted of pieces of 5*s.*, 2*s.* 6*d.*, 1*s.*, 2*d.*, and 1*d.*, amounting to £363.

A privy mark is not mentioned in the record of this trial or in those of later dates. It should be observed that the period during which these silver coins were struck overlaps the period covered by the trial of 9 July, 1663. The presence of the silver piece of 5*s.* shows that some milled coins were tested for the first time on 4 July, 1664.

4 August, 1669. Assays of gold moneys coined from 30 December, 1663, and of silver moneys from 4 July, 1664, until the day of trial; in accordance with (1) the indenture of 20 July, 1660, (2) a warrant of 12 June, 1667, authorizing the striking of gold and silver by the mill and press, (3) a warrant of 19 January, 1662, for striking groats and threepences, and (4) a warrant of 24 December, 1663, for the cutting of the pound Troy of crown gold into 44 pieces and one half, each piece to pass for 20*s.*, and the half for 10*s.*

Gold of 22 carats fine consisted of pieces of £5, £2, £1, and 10s., amounting to £967.

Silver coins consisted of 5s., 2s. 6d., 1s., 4d., 3d., 2d., and 1d., amounting to £381.

I notice that the word "guinea" is never used in the official documents of this period when reference is made to the gold coins. Therefore that term would appear to be merely a popular designation which was not recognized at the mint.

16 January, 1671. Assays of gold and silver moneys coined in accordance with an indenture dated 8 October, 1670.

Gold. £5, £2, £1, and 10s., amounting to £511.

Silver. 5s., 2s. 6d., and 1s., amounting to £194.

"And other silver taken from the same pyx", 4d., 3d., 2d., and 1d., amounting to 10s. 9d.

The fact that the four lowest denominations of silver were noted separately in the record of this trial seems to place them in a class apart from the ordinary currency and to confirm the belief that the type with the linked C's was used for Maundy purposes. This is the only occasion on which the distinction occurs.

21 January, 1672.

Gold. £2, £1, and 10s., amounting to £111.

Silver. 5s., 2s. 6d., 1s., 4d., 3d., 2d., and 1d., amounting to £313.

14 February, 1673.

Gold. £5, £2, £1, and 10s., amounting to £174.

Silver. 5s., 2s. 6d., 1s., 4d., 3d., 2d., and 1d., amounting to £327.

20 February, 1674.

Gold. £5, £1, and 10s., amounting to £130.

Silver. 5s., 2s. 6d., 1s., 6d., 4d., 3d., 2d., and 1d., amounting to £35.

On this occasion the gold was $\frac{1}{4}$ gr. and the silver was $\frac{1}{2}$ dwt. worse than the respective standards.

14 June, 1677.

Gold. £5, £2, £1, and 10s., amounting to £585.

Silver. 5s., 2s. 6d., 1s., 6d., 4d., 3d., 2d., and 1d., amounting to £603.

14 June, 1679.

Gold. As 1677, amounting to £641.

Silver. As 1677, amounting to £166.

5 August, 1681.

1st pyx: from the last trial until 19 July, 1680, in accordance with the indenture of 8 October, 1670.

Gold. As 1677, amounting to £1022.

Silver. As 1677, amounting to £322.

2nd pyx; from 22 July, 1680, under a commission to Sir John Buckworth, dated 15 July, 1680.

Gold. As 1677, amounting to £588.

Silver. As 1677, amounting to £157.

7 November, 1684.

Gold. As 1677. Total coinage £889,919.

Silver. As 1677. Total coinage £317,346.

Coined until 1 October, 1684. In this case the figures must refer to the aggregate sums coined during the period, and not to the amounts found in the pyx. The latter are not given.

JAMES II.

14 July, 1686. In accordance with two commissions to Thomas Neale, dated 10 September, 1684, and 11 March, 1685-6, respectively. The coins struck under the former warrant would presumably comprise the last issue of Charles II.

Gold. As 1677. Total coinage £969,654.

Silver. 2s. 6d., 1s., 6d., 4d., 3d., 2d., and 1d. Total coinage £117,249.

Here, again, the aggregate sums coined are substituted for the amounts found in the pyx.

There was only one trial during this short reign.

Notwithstanding the preparation in 1660 of trial pieces for gold of 23 carats $3\frac{1}{2}$ grs. fine in the pound Troy, no coins of this standard are mentioned in the pyx returns. The standard of the silver was invariably 11 oz. 2 dwt. fine, although the fact is not stated.

With regard to the dates of the various trials, which are here given as in the original manuscript, they should be interpreted according to the Old Style when the day falls between 1 January and 25 March. Thus, the 16 January, 1671, is 1672 according to the present style, or 1671-2 as sometimes written.

HENRY SYMONDS.

XV.

COINS OF THE SHĀHS OF PERSIA.

(Continued from Ser. IV, Vol. XV, p. 248.)

IV. COPPER COINAGE, 1502-1877.

UNDER the Šafavīs every town had its own copper mint and its own particular dies, which were changed yearly, as well as on the appointment of every new governor.

The unit, which, in the earlier part of this period was the *dīnār* of 72 grains, was afterwards superseded by the *kāzbakī* (5 *dīnārs*), which remained in circulation until the issue by Fath 'Alī Shāh of the copper *shāhī*. I have noted the following weights: 288, 216, 144, 72 and 36 grains. It may be added that Russian copper coins were occasionally utilized. We have thus a two copek piece of 1830 with the countermark کاشان
۱۲۶۷ and a two copek piece of 1816 which was re-struck in دار السلطنة Isfahan: *Obv.* lion and sun r., *Rev.* ضرب اصفهان
۱۲۴۱

As great confusion existed owing to the *kṛān* being exchanged in various provinces for 70, 50, 30, or 20 *shāhīs*, Nāṣr ad Dīn, in 1857, fixed the standard for the copper currency at 78 grains. But inasmuch as the old currency was not redeemed, the new issue tended to increase rather than diminish the prevailing chaos. Finally, in 1877, the provincial mints were abolished and a new type of copper coinage was introduced,

which remained unchanged until the issue of nickel coins in 1901.

The following are a few of the unedited copper coins which I presented to the British Museum :

1. Rasht, 1232.

Obv.— گشت رابع بحکم لم یزلی

Rev.— ضرب ۱۲۳۲ رشت

Æ .8 × .9.

2. Rasht, undated.

Obv.—Lion and sun r., in ornamented border.

Rev.— قلوب رشت

Æ 1.5 × .9.

3. Rasht, 1235.

Obv.—Dragon.

Rev.— ضرب رشت ۱۲۳۵

Æ 1.1.

4. Rasht, date obliterated.

Obv.—Double-tailed dragon.

Rev.— ضرب رشت

Æ .8.

5. Rasht, 1148 ?

Obv.—Bird r., formed by the following chronogram :

لخیر فیما و تع

Rev.— ضرب رشت

Æ 1.1.

6. Rasht.

Obv.—Shāh on horseback holding spear r.

Rev.— شاهي ضرب رشت

Æ 1.2.

7. Rasht.

Obv.—Buddha.*Rev.*—ضرب رشت
Æ 1-1.

8. Rasht.

Obv.—Ewe l., beneath ; lamb r.*Rev.*—ضرب رشت

With a sparrow r., between the two words.

Æ .85.

9. Gilān.

Obv.—Camel with rider r.*Rev.*—فلوس ایران ضرب گیلان
Æ .9.

10. Īrān. 1257.

Obv.—Laila and Majnun.*Rev.*—فلوس ایران
Æ .95.

11. Īrān, 1257.

Obv.—Double-headed eagle holding l. sceptre, and r. globe.*Rev.*—Similar to 10.

Æ .8.

12. Ṭabaristān.

Obv.—Bull standing on fish r., above \mathfrak{M} DI.*Rev.*—فلوس ایران ضرب طبرستان
Æ .65.N.B. Similar coin but \mathfrak{M} PA.

13. Kum.

Obv.—عدل فلوس قم*Rev.*—ضرب دارالمؤمنین قم
Æ .8 x .95.

14. Rasht.

Obv. يا خير الراذتين
Rev. ضرب رشت
 Æ 95.

15. Rasht, 1229.

Obv.—Within border of dots عز من قنع ذل من طمع
Rev.— ضرب رشت ١٢٢٩
 Æ 1-1.

N. B. Another Rasht coin bears the Persian rendering of this saying: i.e. عزت بقناعتت و خاری بطمع

16. Tabaristān.

Obv.—Eagle devouring fish, r.
Rev.— ضرب طبرستان
 Æ 7.

17. Astarābād, 1259.

Obv.—Man on horseback, l.
Rev.— فلوس استراباد ١٢٥٩
 Æ 7.

18. Astarābād, 12??.

Obv.—Outline of bird l., within octagon formed by two squares superposed.

Rev.— فلوس استراباد -- ١٢
 Æ 75.

19. Īrān, 1277.

Obv.—Lion recumbent and sun l.; beneath, ١٢٧٧.
Rev.— رایج ایران نیجاه دینار
 Æ 1.

20. Īrān, 1286.

Obv.—Lion and sun L, within wreath of laurels, beneath lion ۱۲۸۶.

Rev.—فلوس رایج ممالک محروسه ایران
Æ .95.

21. Tihirān, 1294.

Obv.—Lion and sun L, within wreath of laurels, beneath lion
شاه دینار

Rev.—Within circle of dots ضرب دار الخلافه طهران ۱۲۹۴
Outer margin, laurel wreath.
Æ .95.

22. Lāhijān.

Defaced, countermark لاهجان
Æ .95.

N. B. I also find a Lāhijān coin with the countermark رفیع

23. Rasht.

Obv.—Cross with pellet in each angle.

Rev.—فلوس رشت
Æ .95. Wt. 1.05.

24. Rasht.

Obv.—Two sparrows facing one another.

Rev.—شاهی ضرب رشت رایج گشت
Æ 1.05.

Of new types for copper coins I also find the following: double-headed eagle; bird flying; boar; bull and stag; camel and driver; fleur de lys; man's head; mitred head; turbaned head; horseman holding spear, below

boar, above bird flying; horseman with uplifted sword; mouse; rope dancer; pair of scales; bust of shah with hawk on his wrist; star; scorpion; two lions back to back with sun behind; serpent attacking sheep; rat; five fishes forming wreath; sagittarius.

Huwaizah, Nakhchivān, Khalajistān, Nahāvand, and Sārī, as mints for copper, are new.

On a copper coin found in Gilān I made out the following:

ز چوکام گرفتہ بد کوینہ تمام
عالی مقام

Chaukān and Kūyakh are two villages near the lagoon of Anzali.

H. L. RABINO.

MISCELLANEA.

Notice sur un tétradrachme de Catane, avec la signature ΠΡΟΚΛΗΣ; et d'un autre de Syracuse, avec X, probablement signature de Kimon.

DANS la 'Numismatique Circular,' fasc. 7, pag. 441, juillet 1914, dans la relation de la séance de la Royale Société Numismatique de Londres, 21 mai 1914, j'ai lu que Sir Arthur Evans, l'éminent Président de ladite Société, a illustré devant la même deux très importantes monnaies grecques de Sicile : l'une, un tétradrachme de Catane, avec



1

2

3

la signature ΠΡΟΚΛΗΣ sous la tête d'Apollon, et l'autre, un tétradrachme de Syracuse, à grande tête de femme, avec la lettre X derrière le cou.

Il paraît, selon ladite relation, que le Dr. A. Evans a fait remarquer que de cette pièce de Catane on ne connaît

qu'un autre seul exemplaire pareil, celui de la collection du Duc de Luynes, à Paris; et que le tétradrachme de Syracuse, avec la lettre **Ν**, probablement signature de Kimon, pour sa combinaison du droit avec le revers, est unique, même inconnu du Tudeer, dans son important et très récent ouvrage sur les tétradrachmes de Syracuse. Ayant observé les empreintes de ces deux pièces, que je dois à l'exquise obligeance du Dr. Evans, j'ai pu constater que l'exemplaire de Catane provient de la vente Egger, Vienne, Nov. 1913, Cat. XLV, N° 260, Pl. VII, et l'autre de Syracuse de la vente du Dr. J. Hirsch, Munich, Nov. 1912, Cat. XXXII, N° 342, Pl. XIII.

Cependant, quant à la pièce de Proclès, j'ai le plaisir de signaler l'existence d'un autre exemplaire, du même type, avec la même signature, appartenant à la célèbre collection du Baron Pennisi de Floristella, à Acireale. Ayant eu le bonheur, il y a quelques années, d'étudier cette collection, je pus, par l'obligeante courtoisie de son possesseur, prendre des notes sur les pièces les plus belles et les plus importantes. En fouillant dans ces notes, j'ai trouvé ainsi décrit ledit tétradrachme de Catane :

D. Au dessus : **KATANAIΩN** (quelques lettres ne sont pas bien lisibles), tête aurée d'Apollon à gauche, les cheveux sont ondulés et relevés derrière; devant, un poisson et une écrevisse, derrière, une feuille de laurier; sous la tête, en très petites lettres, la signature **ΠΡΟΚΛΗΣ**.

R. Quadriga au galop, à gauche, conduit par un auriga tenant le fouet dans la main droite et les rênes dans la gauche. Nike, volant à droite, s'apprête à couronner l'auriga.

Et pour que je pusse me prononcer positivement sur la conformité parfaite de l'exemplaire décrit avec celui de Luynes et l'autre du Dr. Evans, j'ai sollicité de la grande amabilité du Baron Pennisi l'envoi du moulage de son exemplaire, et, en le comparant avec les empreintes des deux autres exemplaires, j'ai pu m'assurer que les trois pièces sont parfaitement identiques, sans la moindre diffé-

rence, bien que l'exemplaire du Baron Pennisi soit moins bien conservé que les deux autres.¹

Je pourrais même supposer que ce tétradrachme était bien connu du Prof. A. Salinas, qui avait tant travaillé sur la collection Pennisi, mais il paraît certain qu'il n'en publia aucune notice. Que si cela était, le très savant Dr. Evans en aurait eu connaissance et, bien sûrement, il n'aurait pas jugé son exemplaire de Catane, par Proclès, le second, mais le troisième jusqu'ici connu.

Quant au tétradrachme de Syracuse, signé de la lettre χ , le Dr. Evans s'est trompé en jugeant que sa pièce était inconnue du Tudeer, dans son ouvrage : 'Die Tetradrachmenprägung von Syrakus in der Periode der signierenden Künstler, . . .' parce que, comme je l'ai dit, elle provient de la vente Hirsch, Nov. 1912, et je la trouve citée dans ledit ouvrage de Tudeer, à la page 49, N° 68^A, et signalée comme unique à la page 288 (25-42 = 68^A, I).

Cependant je vais causer une agréable surprise à ces savants-là, en donnant notice d'un autre exemplaire de Syracuse, inédit, et tout à fait pareil à celui du Dr. Evans, appartenant à une importante collection privée, assez rarement accessible aux numismates, mais qu'une fois j'eus le plaisir de pouvoir observer. Grâce aussi à l'exceptionnelle obligeance, à mon égard, de son possesseur, Mr. J. C., je pus prendre des notes, ainsi que quelques empreintes, des pièces les plus importantes. Et voilà la description dudit exemplaire de Syracuse :

D. Tête de femme, de type large, à droite, portant doubles boucles d'oreilles et un collier orné de neuf perles et d'un pendant. Une *ampyx*, avec nœud devant, entoure les cheveux ondulés, retenus dans une *sphendone* ornée de trois étoiles et d'un motif à zig-zag sur la bandelette inférieure du cou, et de laquelle s'échappent quelques mèches,

¹ Voir les reproductions : n° 1. Tétr. de Luyne, n° 2. Tétr. du Baron Pennisi. Pour le tétr. appartenant à Sir A. Evans je renvoie mes lecteurs au Catalogue Egger précité.

flottantes par derrière. Au dessus, la légende : ΣΥΡΑΚΟ-ΞΙΩΝ. Derrière le cou de la déesse χ ; devant et derrière la tête : deux dauphins.

R. Quadriga au galop, à gauche, conduit par un auriga qui tient les rênes dans les deux mains et le fouet dans la droite. La bride du troisième cheval retombe libre ; sous les pieds du cheval le plus rapproché, une roue brisée. Nike, volant à droite, couronne l'auriga ; à l'exergue, sous double ligne, un épi d'orge, à gauche. Mm. 28, — gr. 17, 27.²

Bien que cette description soit très précise, j'en ai aussi comparé les empreintes avec celles de l'exemplaire du Dr. Evans et je peux, sans doute, annoncer que les deux pièces sont parfaitement identiques et, sûrement, du même coin. L'exemplaire Evans a cependant des défauts de refraappe sur le visage de la déesse, tandis que l'autre de Mr. J. C. est d'une conservation merveilleuse, à fleur de coin.

On peut donc conclure que, jusqu'à présent, on connaît deux seuls tétradrachmes de Syracuse, tout à fait identiques : au type large de Kimon, avec χ derrière le cou de la déesse, associé au quadriga de Parménion, avec la bride à terre et la roue brisée.

G. DE CICCIO.

Palerme, Janvier 1915.

² Voir la reproduction n° 3. L'exemplaire Evans est figuré dans le Catalogue Hirsch précité.

XVI.

A CHRONOLOGICAL ARRANGEMENT OF THE COINS OF CHIOS; PART II.

(Continued from p. 52. SEE PLATES XVIII, XIX.)

INTRODUCTORY NOTE.

SINCE the publication of the first part of this study in the *Numismatic Chronicle*, and after the following pages were practically ready for the press, there appeared in the *Journal of the American Numismatic Society* a monograph by Miss A. Baldwin on the Electrum and Silver Coins of Chios issued during the sixth, fifth, and fourth centuries B.C.

The author has here brought together such a wealth of material, and stated her conclusions in so clear and concise a manner, that I felt on first seeing the paper that it would be a work of supererogation to go over the same ground again. As the present article, however, is only a portion of the whole task that I have set myself, I have decided, with the kind permission and encouragement of the Editors, to entrust it to the *Numismatic Chronicle* as originally intended. In doing so I have now the advantage of Miss Baldwin's researches, which not only covered a wider field than my own, but record a greater number of types than mine do even from sources explored by us both. This is especially noticeable in the case of the didrachms

belonging to the archaic and transitional periods. Altogether Miss Baldwin's catalogue provides a storehouse compared with which the information collected by Mionnet and Kofod Whitte, to whom I have alluded as pioneers in our particular line of inquiry, presents little more than an academic interest.

Reference to Miss Baldwin's work will accordingly be found below wherever it seems worth while to draw attention to the fresh evidence supplied by her, and wherever it has become necessary for me to alter my original views in consequence of the force of her arguments. As a matter of fact, our conclusions with regard to the period now under review are in agreement on all major points, but it may have been noticed that we differ in one or two important particulars connected with the archaic period. As the present seems a fitting occasion on which to refer to these I propose to do so now as briefly as possible.

Miss Baldwin contends, very justifiably from her point of view, that the earliest electrum staters that we possess should not be dated earlier than 550 B.C. I prefer to follow the authorities who think that no electrum coins were struck by the Greek states during their subjection to Persia. In consequence of this, and of my bias in favour of the precocity of Ionic art, it will be found that my types Nos. 3 and 5-7 are dated earlier than Miss Baldwin's more independent standpoint allows by about fifty years on the average.

In arranging these issues I placed type No. 5 before No. 6 chiefly on the strength of what I took to be its more primitive incuse square. Miss Baldwin reverses this order, and her arguments, based on the style of the coins (Nos. 3-6 of her Pl. i), whatever may be the

correct interpretation of their incuses, are quite convincing. The only other important difference of opinion between us—though there are several minor points that would take too long to discuss here—is that concerning the dates we respectively ascribe to the bulk of the archaic silver coinage.

My attribution of the electrum coins naturally led to a corresponding, though of course conjectural, arrangement of the archaic silver wherever possible, as may be seen from the notes on my types Nos. 8-13. Miss Baldwin was forced, for similar reasons, to choose a narrower field, but she seems to me to have crowded the issues together even more than the limits of her period demanded.

On the assumption that the coins she illustrates, Nos. 19-23, Pl. i, are the contemporaries of the stater of the Ionic Revolt (Nos. 9-12, Pl. i) she is obliged to assign some twenty different types, mostly illustrated on Pl. ii, to the years 500-490 B.C. As there is a strong probability that no coins at all were struck for at least three or four years after 494 B.C., this already restricted period must be still further reduced to about six years. But there is a stronger argument still for pushing back and extending the dates of Miss Baldwin's Pl. ii, &c. This is the evidence of the Taranto hoard (*Rev. Num.*, 1912, pp. 1-40), consisting as it did of a large variety of archaic silver coins all earlier than 510 B.C. This hoard included the didrachm No. 25 of Miss Baldwin's Pl. ii, or my type No. 20. It is a fine example of what archaic art was capable of producing at this time, and is, moreover, a most valuable landmark in the Chian series. We are thereby provided with a criterion of date of much greater value than that

afforded by the resemblance between the didrachms with the uplifted paw and the electrum stater of the Ionic Revolt, a resemblance that is due, in my opinion, to the deliberate archaism of the latter.

PERIOD V. 478-431 B.C. (?).

When the tyranny with its Persian sympathies had been finally abolished, Chios became once more a purely Greek island, and entered upon that period of peace and prosperity that was to make her the envy of all her neighbours.⁴⁹ Whereas in the sixth century Samos had been the most powerful Ionian community, the lead passed to Chios after the Persian wars, and for the best part of seventy years the island was able to devote all its energies to the development of its resources. It was rare indeed among the Greek city-states for such a long term of years to pass without war, and, more remarkable still, without civil strife.

At first the oligarchy or aristocratic party had complete control of affairs, and seems to have conducted them very successfully. Then, under the influence of Athens, a democratic party arose for the first time in the island's history, and gained ground steadily, though only slowly at first. This sowed the seeds of all the subsequent faction and disorder that wrought such destruction in Chios towards the end of the fifth century. But during the course of the present period, or at any rate during the earlier part of it, Chios seems to have been an eastern rival of Athens. That state of things could not last for long of course, and as Athens grew

⁴⁹ Thucydides viii. 24.

the island had either to submit to the greater power or become its ally. The ruling party was wise enough to perceive the advantage of the latter course, and, though secretly antagonistic to her, its members kept up the appearance of being sincerely friendly to Athens. They maintained their position in the state by yielding on every occasion when Athens interfered in its affairs, and at the beginning of the Peloponnesian war Chios even sent her fleet against Sparta though really in sympathy with her cause.

It is to the period of true independence, which is hard to define within a decade, that belong the famous didrachms and tetrobols that are perhaps the best known of the island's silver coins. They must have been issued in large quantities, but a really fine specimen is very hard to obtain, for in spite of the skill and care with which the dies were executed the coins are seldom well struck. The weight is carefully preserved on the whole, but does not quite equal that attained by the didrachms of the previous century. It is by no means unusual to come across one of the latter weighing 123 grains (7.97 grammes), or the maximum of the standard, but among the fifth-century didrachms 121.5 grains (7.87 grammes) is the highest point touched in my experience. This is confirmed by the tetrobols, the heaviest I know of being No. 13 of *B. M. Cat.: Chios*, which weighs 40.5 grains (2.624 grammes), and thus exactly represents the limit reached by the didrachms.

The type carries on the leading features of the previous century with the addition of a bunch of grapes above the amphora, and a few minor refinements, some of which have already been noted as

appearing sporadically in the last period but one. The amphora itself, for instance, is neatly fitted with a stopper, and the hair of the Sphinx is always raised. The whole design, moreover, is invariably arranged on a convex circular shield.

The varieties, although insignificant from the point of view of artistic interest, are sufficiently numerous to show that these issues must have continued uninterruptedly over a considerable period. No better proof could be found of the conservative policy of the mint thus far than the way in which the simplicity of the type was preserved at a time when artistic development was at its highest. The bean-shaped flan, punch-struck incuse, and division into thirds are also signs of adherence to previous tradition and to Ionian influence. The analogy with Athenian contemporary practice is striking as regards the archaism of the coins, but there is not a trace as yet of Athenian influence over the methods of the mint. That was still to come. We have no record of any sculptors of note during this period, but the engraver Dexamenos, who flourished between 460 and 430 B.C., is known to have been a native of the island. Most of his work, however, if not all of it, is supposed to have been done outside Chios, and nothing has yet been discovered among its coins that could be ascribed to him.

One of the most keenly discussed subjects connected with the Chian series finds its place in the present period. I allude to the late electrum issue struck on the Cyzicene, or, according to M. Babelon, on the Lampsacene standard. This is represented to-day by a unique stater at Berlin, which has been attributed to such widely different dates as the last quarter of

the sixth⁴⁹ and the first half of the fourth century B.C.⁵⁰

The latest student of the question, Miss A. Baldwin, in her "*Electrum Coinage of Lampsakos*", pp. 15-18, suggests the decade 450-440 B.C. as the probable date of this stater's issue. The author bases her arguments on considerations of style as between this actual piece and the other fifth-century coins of Chios on the one hand, and the Ξ staters of Lampsacus, independently proved to have been issued *circa* 450 B.C., on the other. I entirely agree with her conclusions, though inclining towards the later limit of the date suggested by her rather than the earlier one.

It seems to me that this coin was struck at the height of the Chian prosperity already referred to as having occurred between the Persian and Peloponnesian wars, and while the island was still perfectly independent. The issue may very well have been made with the object of competing on the Athenian market with the Cyzicene staters that were then in such keen demand there.⁵¹

The following are the principal types of the didrachms and tetrobols:

24. *Obv.*—Sphinx of transitional style seated l. on plain exergual line; wing curled in naturalistic manner; hair rolled; and further foreleg

⁴⁹ Babelon, *Traité*, ii, pp. 191-3.

⁵⁰ Von Sallet, *Kgl. Münzkabinett*, No. 82.

⁵¹ It will be noticed that, as M. Babelon has already observed *loc. cit.*, the weight of this stater is rather lower than that of the Cyzicenes, 236.7 grms (15.34 grammes) as against 252-246.9 grains (16.33-16.00 grammes). At the conventional ratio of 10:1, as between silver and electrum, twenty of the contemporary silver didrachms would have been almost exactly equal in value to one of these staters.

showing behind nearer. In front stoppered amphora [with ball at point], surmounted by bunch of grapes hanging perpendicularly. The whole on raised circular shield.

Rev.—Quartered incuse square divided by broad bars into moderately deep and irregularly shaped compartments; punch-struck.

R. $\frac{19.50}{13.00}$ mm. Weight? Chian didrachm. Cabinet de France. [Pl. XVIII. 1.]

25. *Obv.*—Sphinx of transitional style seated l. on plain exergual line; wing curled in semi-conventionalized manner; hair elegantly dressed on top of head; further foreleg outlined beyond nearer. In front stoppered amphora, with ball at point, surmounted by bunch of grapes hanging perpendicularly. The whole on raised circular shield.

Rev.—Similar to preceding.

R. $\frac{16.50}{14.00}$ mm. 120.3 grains (7.795 grammes). Chian didrachm. My collection. [Pl. XVIII. 2.]

(Miss Baldwin places this, or a similar type, at the end of her didrachm series, No. 44, pp. 22–3. I prefer this order because the eye of the Sphinx is not in profile as in the succeeding types, and the position of the bunch of grapes connects this with the earlier type, No. 24.)

26. *Obv.*—Sphinx of early fine style seated l. on plain exergual line; wing curled in semi-conventionalized manner; hair arranged in a mass of short curls; further foreleg outlined behind nearer. In front stoppered amphora, with ball at point, surmounted by vine-branch showing leaves and bunch of grapes inclined to left. The whole on raised circular shield.

Rev.—Similar to preceding except that the bars are extra broad.

R. 15.75 mm. 121.2 grains (7.85 grammes). Chian

didrachm. Coll. B. Yakountchikoff ex Sherman Benson Coll., No. 696 (part of), Sotheby's Cat., 1909. [Pl. XVIII. 3.]

16.50 mm. 121.5 grains (7.87 grammes). Chian didrachm. Brit. Mus., No. 7, Cat. Ionia, Chios.

$\frac{16.50}{15.00}$ mm. 120.2 grains (7.792 grammes). Chian didrachm. My collection.

26^a. Variety of preceding without leaves to vine-branch over amphora.

Æ. $\frac{18.50}{14.50}$ mm. 120.4 grains (7.80 grammes). Chian didrachm. Cabinet de France. [Pl. XVIII. 4.]

$\frac{17.75}{13.50}$ mm. 121.2 grains (7.85 grammes). Chian didrachm. My collection.

Both common.

27. *Obv.*—Sphinx of early fine style seated l. on plain exergual line; wing curled in more naturalistic manner than in other coins of this period; hair elegantly dressed; only one foreleg showing. In front stoppered amphora [with ball at point]. The whole in vine-wreath, showing a bunch of grapes both before and behind the Sphinx, on raised circular shield.

Rev.—Quartered incuse square divided by broad bars into shallow compartments; punch-struck.

Æ. $\frac{16.50}{12.50}$ mm. 119.8 grains (7.76 grammes). Chian didrachm. Brit. Mus., No. 12, Cat. Ionia, Chios. [Pl. XVIII. 5.]

(Miss Baldwin calls all these coins transitional, but I am venturing to divide them into transitional and early fine art, with the drawing of the Sphinx's eye as a test.)

28. *Obv.*—Sphinx of transitional style seated l. on plain exergual line; wing curled in semi-conventional manner; hair rolled; further foreleg showing behind nearer. In front stoppered

amphora, with ball at point, surmounted by bunch of grapes inclined to l. The whole on raised circular shield.

Rev.—Quartered incuse square divided by narrow bars into moderately deep compartments; punch-struck.

R. 10.50 mm. 39.3 grains (2.545 grammes). Chian tetrolol. Mr. W. C. Weight's stock, 1914.

[Pl. XVIII. 6.]

10.75 mm. 37.8 grains (2.45 grammes). Chian tetrolol. My collection.

Rather rare.

29. *Obv.*—Sphinx of early fine style seated l. on plain exergual line; wing curled in semi-conventionalized manner; hair elegantly dressed on top of head; further foreleg outlined behind nearer. In front stoppered amphora, with ball at point, surmounted by bunch of grapes hanging perpendicularly. The whole on raised circular shield.

Rev.—Similar to preceding.

R. 10.25 mm. 40.1 grains (2.60 grammes). Chian tetrolol. Cabinet de France, No. 4972.

[Pl. XVIII. 7.]

11.00 mm. 39.1 grains (2.53 grammes). Chian tetrolol. My collection.

10.50 mm. 40.5 grains (2.624 grammes). Chian tetrolol. Brit. Mus., No. 13, Cat. Ionia, Chios.

Common.

30. *Obv.*—Sphinx of early fine style seated l. on plain exergual line; wing curled in semi-conventionalized manner; hair arranged in a mass of short curls; only one foreleg showing. In front stoppered amphora, with ball at point, surmounted by bunch of grapes inclined to l. The whole on raised circular shield.

Rev.—Similar to preceding.

R. 11.00 mm. 39.3 grains (2.545 grammes). Chian tetrolol. Brit. Mus., No. 15, Cat. Ionia, Chios. [Pl. XVIII. 8.]

Uncertain rarity.

The electrum stater referred to above may be described as follows:

31. *Obv.*—Sphinx of early fine style seated l. on plain exergual line, raising further forepaw; wing curled in semi-conventionalized manner; hair rolled. In front stoppered amphora, with ball at point, surmounted by bunch of grapes which hangs from vine-wreath encircling the type and is touched by Sphinx's upraised paw.

Rev.—Incuse square of mill-sail pattern like Cyzicene staters; anvil-struck.

El. $\frac{18.50}{17.00}$ mm. 236.7 grains (15.34 grammes).

Lampsacene stater. Berlin Cabinet.

[Pl. XVIII. 9.]

No. 24. This is the earliest didrachm showing the bunch of grapes of which I have been able to obtain a cast, and it is also the only one of its type that I have seen. In the collection of Prof. Pozzi, of Paris, there is another early type which may possibly be a trifle older. It has the letters $\chi\iota\omicron\varsigma$ in the depressions of the reverse which were noted in Nos. 17 and 20 of Period III. Miss Baldwin shows two more specimens of this type, and also three intermediate types between it and the next (Nos. 8, 9, and 11-14, Pl. iii).

Nos. 25-7. These types may be supposed to have followed each other in the order given. This is only conjectural, of course, and they do not represent all the known varieties of their class by any means. But they are typical of the principal changes in the design, which are mostly unimportant. The eye of the Sphinx from No. 26 onwards will be observed to be correctly drawn in profile. The flans seem to have become flatter as time went on. No. 25 is a very rare variety, and No. 27 is unique to the best of my belief. There

is no reason to suppose from the wreath surrounding the type that this coin belongs to the same issue as the electrum stater, No. 31.

Nos. 28-30. It is extremely difficult to distinguish between the various issues of these little pieces as they are so carelessly struck, and, with the small surface available, the slight differences to be noted are almost imperceptible. Still, I have succeeded in identifying at least three varieties, and I am illustrating them on **Pl. XVIII** from specimens which, I hope, are sufficiently well preserved to justify my pretensions. Although the wing of No. 28 is rather later in style, though not in shape, than that of the didrachm No. 24, these two coins cannot be much removed from each other in date of issue. It is by far the earliest tetrobol I have seen. It has the full-faced eye, large head, and short wing of the purely transitional coins. No. 29, on the other hand, has the long neck, elegant head, and upright bunch of grapes of the intermediate types of didrachm. And No. 30, showing as it does the characteristic curls of didrachms Nos. 26 and 26*, may safely be classed as their contemporary. The eye in this type is undoubtedly drawn in profile, as in the didrachms.

No. 31. This unique stater was first published by Fr. Lenormant in the *Rev. Num.*, 1864, Pl. i. 4. From the point of view of style it forms a link between the foregoing silver didrachms and the tetradrachms with their divisions of the next period. The amphora shows the stopper of the earlier coins, which after this is seen no more; but the drawing of the Sphinx by means of a very flat curve between throat and fore-foot, in place of the bird-like outline of the didrachms

and tetrobols, connects it directly with the later issues. The heavy muscular foreleg is also characteristic of the tetradrachm issues, but the wing, on the other hand, comes nearer to the less conventionalized type of the didrachms. The raised shield is absent, and though this is a feature that tends to disappear, and is consequently of value in determining the approximate date of a coin, its absence in this case, taken in conjunction with the other details of the type, may be disregarded. Miss Baldwin very correctly points out that the amphora on this stater, apart from the stopper, has the character of that on the succeeding tetradrachms.

PERIOD VI. 431(?)–412 B.C.

Although the oligarchy continued to rule after the outbreak of the Peloponnesian war, the democracy was now much stronger, and it was only by absolute subservience to Athens⁵² that the former party maintained its hold on the reins. Athenian influence was paramount, and when, in a last burst of independence, the islanders tried, in 425 B.C., to fortify their capital, an order came from Athens that the walls were to be thrown down. It was promptly obeyed.⁵³ So things continued until the news of the Sicilian disaster gave the aristocrats their opportunity. In 412 B.C. they at length threw off the mask and declared for the enemies of Athens, and the renewed strength that they gained under their fresh masters enabled them

⁵² Eupolis, quoted by Scholiast on Aristophanes, *Birds*, 881.

⁵³ Thucydides iv. 51.

to keep the bulk of the population, who did not approve of the revolt, in subjection.

On turning to the coins this growth of foreign authority is clearly reflected in them. It is impossible to say exactly when it began, but probably some time between 440 and 431 B.C. a complete change came over the methods of the Chian mint. Though it is convenient on account of the familiarity of the date to fix the year 431 B.C. as the dividing line between Periods V and VI, I am at the same time marking it as doubtful because it looks as if the change must have taken place a few years before the outbreak of the Peloponnesian war.

It is possible that the decree of Clearchus, or rather the policy that it embodied, which dated from the transfer of the Delian fund to Athens in 454 B.C., may have been the immediate cause of this change in the currency. The decree forbade the use of any silver money but Attic in cities subject to Athens, and the introduction of the tetradrachm, &c., at Chios looks like a compromise between the two states. Chios would have been incapable of refusing to comply with the decree if enforced, and Athens would probably have hesitated to dictate on such a matter to so valuable an ally. The date of the decree is not exactly known, but it fell some time between 454 and 414 B.C.⁵⁴

In the clean sweep now effected the standard and type were preserved, it is true. They had made too good and too wide a reputation for themselves to be interfered with to any serious extent, but the weight

⁵⁴ See P. Gardner, "The Coinage of the Athenian Empire," *J. H. S.*, 1913.

was again slightly reduced, and the design was less carefully executed.⁵³ Everything else that connected the coinage with the old Ionian traditions was swept away. The denominations were altered; the Ionian system of division into thirds and sixths gave way to the Athenian preference for halves and quarters; and the method of anvil-striking was adopted, the old bean-shaped punch-struck flans disappearing for good with the didrachms and tetrobols.

The issues of this new style consisted of tetradrachms, divided into drachms and hemidrachms. No didrachms are known, and their absence is another feature in agreement with Athenian custom. The evolution of this coinage presents a few minor problems. It is customary among most Greek series to find anepigraphic coins followed by others bearing, first, symbols representing the magistrate of the year; next, single letters or monograms, the initials of their names; and finally, the magistrates' names themselves in full. All these steps occur in the Chian issues of the present period, but, as will appear in due course, their sequence in the order commonly supposed to be the normal one cannot be substantiated from the style of the coins. As no other arrangement, however, gives completely satisfactory results, I prefer to follow the stereotyped course, and to point out the objections to it as they arise.

All authorities hitherto have assigned the tetradrachms without symbols or names [Pl. XVIII. 10]

⁵³ The question of weights will be developed more fully later on. The quality of the work speaks for itself. Compare the amphora and Sphinx's tail of Pl. XVIII. 10 with the same details on any of the didrachms.

to a much earlier date than that now suggested, regarding them in fact as forming part of a coinage in which the didrachms and tetrobols just described [Pl. XVIII. 1-7] were relegated to a subordinate position. But a very little consideration for details of style will, I think, suffice to show that any such theory is untenable. Attention has already been drawn to the chief points under this head in the remarks made above on type No. 31, the electrum stater of the last period. The conventionalized wing exhibited by even the earliest of the tetradrachms, to confine ourselves to one point only, is so obviously a development of the more naturalistic forms found on the didrachms that it is in itself a sufficient proof that the latter must have led the way. The drawing of the Sphinx's body too, and the disappearance of the stopper from the amphora in the coins attributed to the present period, tend in the same direction. Also, the comparatively small differences in treatment between the tetradrachms without names and the earliest of those with them would necessitate moving up a considerable quantity of that large series, not to speak of the few issues with symbols, or the drachms with letters, &c., into the first half of the fifth century, if the theory were carried to its logical conclusion. The impracticability of such a step of course requires no demonstration.

There is also the question of the weights of the different coins. These speak for themselves for the most part, especially when we consider that most of the early tetradrachms that we have are in nearly mint state. The heaviest, as will be seen below, is the one at Boston, which is the counterpart of the

British Museum specimen. This weighs 237.7 grains (15.40 grammes), which represents a didrachm of 118.8 grains (7.70 grammes), whereas it has already been pointed out that didrachms of Period V are known weighing as much as 121.5 grains (7.87 grammes). Besides, since we cannot separate didrachm No. 26 from tetrobol No. 30, nor tetradrachm No. 32 from drachm No. 33, one would have to suppose that two distinct systems of division were being carried on concurrently if all these coins are to be taken as contemporaries. What system do we know, even amid the splendid confusion of Greek monetary standards, that would combine a didrachm weighing 121.5 grains (7.87 grammes) maximum and a tetrobol or third in perfect agreement with it, with a tetradrachm and drachm representing a didrachm of 118.8 grains (7.70 grammes) maximum?

Miss Baldwin records a tetradrachm with the *astragalus* symbol (No. 54 *a*, fig. 6, of her paper) from the Ashburnham Sale Cat., Sotheby's, 1895, weighing 239.97 grains (15.55 grammes). If this weight could be relied upon it would somewhat weaken the above argument, as the resulting didrachm would be 119.98 grains (7.775 grammes). But since the four other known tetradrachms with symbols are all of considerably less weight, there seems to be some justification for doubting the accuracy of the catalogue.

Whether the coinage after the change was less plentiful or not than before cannot be stated with certainty, but there are signs that it was, at any rate for a time. We have no tetradrachms, for instance, with a single letter or monogram, and even those with symbols are excessively rare, while if the drachms

with letters, some of which are fairly common, occupied the place in the series assigned to them here, it would mean that there was a gap in the tetradrachm issues. There are also several issues of drachms and hemidrachms without letters of undoubtedly later date than the tetradrachm No. 32, though apparently contemporaries of the drachms with letters. Like the latter, these coins have no accompanying tetradrachms either. Their absence in both cases may be purely accidental of course, but it may mean, as suggested above, that the coinage was somewhat restricted for a short period before the revolt from Athens.

This particular phase of the coinage is represented on Pl. XVIII. 17-22 and Pl. XIX. 1-3. The pieces there illustrated include, as will be observed, two bronze coins, and though it may seem revolutionary to suggest that bronze was coined at Chios as early as this, there is nothing inherently improbable about it. Bronze is known to have been struck at Athens during the archonship of Callias in 406 B.C., and, if M. Svoronos's theory with regard to the *κόλλυβες*⁵⁶ is to be credited, it was introduced there at a much earlier date still. Camirus in Rhodes seems to have made use of it in its coinage considerably before the end of the fifth century (*B. M. Cat. : Caria, Rhodes, Camirus*, No. 15, 500-408 B.C.), and Samos also struck bronze of good style that is attributed to the beginning of the fourth century (*B. M. Cat. : Ionia, Samos*, Nos. 143-60).

The little bronze pieces that I am venturing to include in the present period are not well known, but they have everything to recommend their attribution

⁵⁶ *Journal Int. d'Arch. Num.*, 1912, pp. 123-60.

so far as style is concerned. The only doubtful point about them is the somewhat early appearance of a reverse type combined with punch-striking, at a time when anvil-striking was in force, and when the other coins, suggested as their contemporaries, still had conventionalized incuse reverses. The use of a new metal may be enough to account for this innovation. Moreover, the reverse of drachm No. 45 is so highly conventional that it almost amounts to a type, and yet it is an unmistakable contemporary, within a year or so, of the other drachms in its class whether with or without letters.

Though the definite attribution of these early bronze coins must remain an open question for the present, I think that there can be no gainsaying that they must at any rate follow the fortunes of the drachms and hemidrachms with which they are now grouped. Until the production of evidence tending to determine the date of the latter more exactly than I am able to do there seems no serious objection to the present arrangement.

The early tetradrachms and their divisions, so far as they are known to us, together with the apparently separate issues of drachms, hemidrachms, and early bronze, are the following:

32. *Obv.*—Sphinx of fully developed style seated l. on plain exergual line; wing curled in conventionalized manner; hair elegantly dressed on top of head; further foreleg outlined behind nearer. In front amphora [with ball at point], surmounted by bunch of grapes hanging perpendicularly. The whole on raised circular shield.

Rev.—Quartered incuse square, divided by narrow bars into shallow and irregularly shaped compartments; anvil-struck.

R. 23.50 mm. 237.6 grains (15.40 grammes). Chian tetradrachm. Boston Mus., U.S.A., ex Warren Coll., No. 1142, Regling Cat.

22.50 mm. 235.6 grains (15.27 grammes). Chian tetradrachm. Brit. Mus., No. 5, Cat. Ionia, Chios. [Pl. XVIII. 10.]

33. Identical with preceding.

R. 14.00 mm. 58.2 grains (3.77 grammes). Chian drachm. Metr. Mus., New York, ex Ward Coll., No. 680, G. F. Hill's Cat.
[Pl. XVIII. 11.]

14.25 mm. 57.9 grains (3.75 grammes). Chian drachm. Berlin Cabinet ex Löbbecke Coll., 1906.

34. Similar to preceding, but reverse has broader bars.

R. 10.00 mm. 23.5 grains (1.52 grammes). Chian hemidrachm. My collection.
[Pl. XVIII. 12.]

35. *Obv.*—Similar to No. 32, except that Sphinx is drawn with the further breast showing, and a *dolphin*, head to l., in field r.

Rev.—Similar to No. 32, but reverse has broader bars, and is slightly more conventionalized.

R. $\frac{23.00}{20.50}$ mm. 236.5 grains (15.32 grammes). Chian tetradrachm. Sir H. Weber's collection.
[Pl. XVIII. 13.]

36. *Obv.*—Similar to No. 32, but of more careless execution, and with an *astragalus* in field r. The convex shield is also lower than in any of the preceding types.

Rev.—Quartered incuse square divided by rather broad bars into moderately deep compartments; anvil-struck.

R. $\frac{23.50}{22.00}$ mm. 236.9 grains (15.35 grammes). Chian tetradrachm. Munich Cabinet.
[Pl. XVIII. 14.]

37. *Obv.*—Similar to No. 35, but of softer style. The Sphinx is drawn to show both breasts in excellent perspective, and has the hair dressed more loosely than in No. 35, with a lock hanging on neck. The dolphin in field r. is inclined downwards, and the convex shield is even lower than in No. 36.

Rev.—Quartered incuse square evenly divided by rather narrow bars into large shallow compartments showing a finely and artificially granulated ground; anvil-struck.

- R.* $\frac{25.00}{22.00}$ mm. 232.2 grains (15.05 grammes). Chian tetradrachm. R. Jameson Coll. ex Coll. G. Duruflé, No. 1522, R. J.'s Cat.
[Pl. XVIII. 15.]

$\frac{25.00}{22.00}$ mm. 217.6 grains (14.10 grammes). Chian tetradrachm. Berlin Cabinet (worn).

38. *Obv.*—Similar to preceding, except that the Sphinx's breasts are not shown, and that the dolphin in field r. is here drawn head downwards.

Rev.—Identical with No. 36, allowing for difference in size.

- R.* $\frac{16.00}{13.50}$ mm. 55.9 grains (3.62 grammes). Chian drachm. Berlin Cabinet. [Pl. XVIII. 16.]

- 38^a. Similar to preceding, except that Sphinx has its hair dressed in the earlier manner of No. 33.

R. 13.50 mm. 52.5 grains (3.40 grammes). Chian drachm. Brit. Mus., No. 22, Cat. Ionia, Chios.

12.75 mm. 50.8 grains (3.29 grammes). Chian drachm. Brit. Mus., No. 23, Cat. Ionia, Chios.

39. *Obv.*—Sphinx of fully developed soft style seated l. [on plain exergual line]; wing curled in conventionalized manner; hair rolled, with one lock

hanging on neck; further foreleg faintly outlined behind nearer. In front amphora [with ball at point], surmounted by bunch of grapes hanging perpendicularly. The whole on slightly raised circular shield.

Rev.—Quartered incuse square divided by narrow bars into shallow compartments showing a finely granulated ground; anvil-struck.

R. 13.00 mm. 54.8 grains (3.55 grammes). Chian drachm. Cabinet de France, No. 4978.

Rather rare.

[Pl. XVIII. 17.]

39^a. Identical with preceding, except that reverse has a larger and more conventionalized incuse square showing an artificially granulated ground.

R. 13.75 mm. 56.2 grains (3.64 grammes). Chian drachm. Cabinet de France, No. 4979.

[Pl. XVIII. 18.]

14.00 mm. 54.8 grains (3.55 grammes). Chian drachm. Cabinet de France, No. 4976.

15.00 mm. 53.6 grains (3.47 grammes). Chian drachm. Vienna Cabinet.

Common.

40. Identical with preceding.

R. 12.00 mm. 27.6 grains (1.79 grammes). Chian hemidrachm. My collection.

[Pl. XVIII. 19.]

Rare.

41. Same as No. 39^a, except that in field r. the letter E is engraved above the Sphinx's tail.

R. 14.25 mm. 52.5 grains (3.40 grammes). Chian drachm. Cabinet de France, No. 4977.

[Pl. XVIII. 20.]

41^a. In field r. Θ, and reverse has fine granulations like No. 39.

R. 14.00 mm. 57.4 grains (3.72 grammes). Chian drachm. Imhoof-Blumer's *Mon. Gr.*, No. 134.⁵⁷

⁵⁷ This coin, which is now in Berlin, shows no trace of the X on reverse mentioned in Dr. Imhoof-Blumer's description.

13.50 mm. 51.7 grains (3.35 grammes). Chian
drachm. My collection.

15.00 mm. 55.3 grains (3.58 grammes). Chian
drachm. Prowse Coll., No. 1095, Egger's
Cat., 1914.

41^b. In field r. K, and reverse like No. 39.

A. 14.00 mm. 57.1 grains (3.705 grammes). Chian
drachm. My collection ex Philipsen Coll.

13.50 mm. 54.3 grains (3.52 grammes). Chian
drachm. Berlin Cabinet.

13.00 mm. 55.4 grains (3.59 grammes). Chian
drachm. Hunterian Coll., No. 2.

41^c. In field r. <.

A. 13.50 mm. 54.0 grains (3.498 grammes). Chian
drachm. Sir H. Weber's Coll.

42. Similar to No. 38, but with monogram Δ in place of
the dolphin. The first specimen described
below has a crescent in one of the depressions
of the incuse square. The incuse, though
similar to that of No. 38, is of a later and
more formal type.

A. 14.00 mm. 57.0 grains (3.695 grammes). Chian
drachm. My collection.

13.50 mm. 55.5 grains (3.595 grammes). Chian
drachm. Brit. Mus., No. 19, Cat. Ionia,
Chios.²⁸

13.00 mm. 57.0 grains (3.70 grammes). Chian
drachm. Philipsen Coll., No. 2249, Hirsch's
Cat., 1909.

42^a. In field r. H.

A. 14.75 mm. 53.2 grains (3.45 grammes). Chian
drachm. Cabinet de France, No. 4975.

[Pl. XVIII. 21.]

14.25 mm. 57.3 grains (3.71 grammes). Chian
drachm. Berlin Cabinet.

²⁸ In the *B. M. Cat.* this mon. is rendered Δ , but I think that
 Δ is the correct reading.

13.50 mm. 54.0 grains (3.498 grammes). Chian drachm. Brit. Mus., No. 20, Cat. Ionia, Chios.

42^b. Same as preceding with Π , but reverse has granulated surface like No. 41.

R. 13.50 mm. 54.8 grains (3.55 grammes). Chian drachm. Berlin Cabinet.

Rare.

43. Same as No. 39^a, but in field r. ΔH .

R. 13.25 mm. 55.3 grains (3.583 grammes). Chian drachm. My collection.

Rare.

44. Same as preceding, but in field r. Σ .

R. 11.50 mm. 28.9 grains (1.873 grammes). Chian hemidrachm. Brit. Mus., No. 27, Cat. Ionia, Chios. [Pl. XVIII. 22.]

Rare.

45. *Obv.*—Sphinx seated l., as on No. 39, but of larger size, and hair in thicker roll resembling a turban.

Rev.—Quartered incuse square divided by broad bars into very shallow compartments filled with coarse granulations; anvil-struck.

R. 14.00 mm. 56.0 grains (3.63 grammes). Chian drachm. Berlin Cabinet ex Imhoof-Blumer Coll., 1900. [Pl. XIX. 1.]

46. *Obv.*—Sphinx similar to preceding seated l. on raised circular shield without exergual line. Before it bunch of grapes hanging perpendicularly.

Rev.—Amphora, with ball at point, in circle of large dots within incuse circle; punch-struck.

Æ. 11.00 mm. 20.8 grains (1.35 grammes). Berlin Cabinet ex Löbbecke Coll. Published *Z. für N.*, 1887, pp. 148-57, No. 18. [Pl. XIX. 2.]

10.00 mm. 18.5 grains (1.20 grammes). Athens Cabinet.

10.25 mm. 17.4 grains (1.125 grammes). My collection ex Philipsen Coll.

Rather rare.

46^a. Same as preceding, but type to r.

Æ. 10.00mm. 21.60 grains (1.40 grammes). Athens Cabinet.

47. Same as No. 46, but shield on obverse very slightly raised, no incuse circle on reverse, and on either side of amphora the letters Α Ξ.

Æ. 10.00 mm. 16.8 grains (1.09 grammes). Berlin Cabinet ex Løbbecke Coll. Published *Z. für N.*, 1887, pp. 148-57, No. 17. [Pl. XIX. 3.]

11.25 mm. 15.1 grains (0.98 gramme). Athens Cabinet.

Very rare.

47^a. Same as preceding, but no dotted circle or letters on reverse.

Æ. 10.00 mm. Weight? Published *Z. für N.*, 1887, pp. 148-57, No. 19, ex Løbbecke Coll.

(A specimen at Paris has the letter Ξ (retrograde) to r. of amphora, but is in too bad condition for fuller description.)

No. 32. The chief points of this fine coin have already been noted. The two specimens quoted are from the same dies, and Miss Baldwin mentions a third from Brussels with different dies.

No. 33. There can be no doubt whatever that this drachm belongs to the same issue as the preceding. This cannot also be said with regard to the hemidrachm No. 34, though the form of its incuse and the absence of any symbol justify its position. The coin is unfortunately in bad condition, but it is the only specimen I have seen. Miss Baldwin illustrates another from Cambridge, No. 24, Pl. iv, which, although in better condition than mine, and undoubtedly belonging to this period, also cannot be said to represent the same issue as No. 33.

Nos. 35-7. The development of style in these three coins is very gradual and interesting, particularly as regards the raised shield of the obverse. The first is, I believe, unique. The second, thanks to Miss Baldwin's discovery of the Ashburnham specimen, referred to above because of its weight, is represented by two specimens. The third is also only known by the two specimens recorded here, the latter of which, from Berlin, is very much worn and has lost a good deal of weight. This type, No. 37, shows the first signs of the softer style and turban-like arrangement of the hair characteristic of the drachms assigned to the end of this period. The naturalistic manner, too, in which the bodily forms of the Sphinx are treated distinguish this issue from all other contemporary ones, and, as even the well-preserved specimen is of light weight for the period, it may fairly be regarded as the latest tetradrachm we have previous to those with names.

Nos. 38 and 38*. Judging from their reverses, which are curiously like that of tetradrachm No. 36, and the position of the dolphin, these drachms may belong to an earlier issue than the preceding. Their obverses present a duality of type similar to those of the drachms next to be described.

These are all the types at present known with symbols in the field. As has been observed above, the chief feature in which they, and all succeeding Chian issues, differ from the didrachms of the last period is the absence of the stopper from the amphora. This is an infallible test, although only such a small detail in itself, and is a strong argument, of the second order, in favour of including the electrum stater, No. 31,

among the coins that appeared before the change introducing the tetradrachms and their divisions.

We now come to the later drachms and hemidrachms with which no corresponding tetradrachms have so far been identified. It will at once appear from a comparison of **Pl. XVIII. 11 and 12** with **Pl. XVIII. 17 and 19**, that perfectly distinct issues of these anepigraphic coins were made, and that the latter form part of a subsequent and what looks like a separate phase of the coinage. The isolation suggested may, of course, be more apparent than real, and it seems just possible that the coins with letters only may have been issued in conjunction with the earliest tetradrachms bearing magistrates' names in full. If there are no tetradrachms, however, with single letters or monograms it is equally true that there are no drachms exactly corresponding to the two earliest of the three classes into which the tetradrachms bearing full names may be divided. From the list of these given below it will be seen that all the single letters and monograms known to us from the drachms and hemidrachms, except **H** and **Κ**, can be matched with names from those set out below under the tetradrachms of class *a*. But the style of the two denominations does not agree in the manner that one would expect from pieces forming part of the same issue.⁵⁹ And if, in spite of

⁵⁹ To illustrate this compare **Pl. XVIII. 10 and 11**, which undoubtedly belong to the same issue, with the combination now suggested, **Pl. XVIII. 20 and Pl. XIX. 4**.

While the main points of difference between the latter, viz. their reverse types, and the single letter as opposed to the full name, suggest a later date for the tetradrachm and its fellows than for the drachm, it must be admitted that the Sphinx's head on the tetradrachms has an earlier look than that on the drachms on

this, we are to look upon the tetradrachms signed by *Ἀσμενος* and the rest of his class as the true contemporaries of the drachms with letters, what are we to think of the drachms without letters, Nos. 39, 39^a, and 45? These two groups cannot be separated from each other, nor, for the matter of that, can either of them be easily distinguished from the earlier of the two classes of drachms with names in full, though these must surely have been subsequent issues.

Among the bronze coins of Imperial times issues will be found without magistrates' names alternating with others on which names occur, down to the very last products of the mint under Gallienus. Can it be that some such custom as this, the meaning of which—even in Imperial times—is unknown to us, so far as I am aware, may also have been in force in the fifth century B.C.? It seems unlikely, though there are signs of the practice during the intervening centuries, in the case of small coins both of silver and bronze, to which attention will be drawn in due course.

In the matter of weights these coins stand on a distinctly lower level than the anepigraphic drachms that preceded them. From the table given below, with the object of demonstrating the gradual decline

account of the former's resemblance to type No. 32. See remarks made below, under type No. 46, with reference to the similar characteristic that it presents.

Mr. G. F. Hill makes the suggestion, for which I am much obliged, that these single letters may be numerals. This seems highly probable, but the difficulty of the anepigraphic specimens remains, and that of determining the proper place in the series of the drachms in question is, if anything, increased. Judging from the highest surviving letter, *Λ*, the group, on this hypothesis, would have lasted twelve or eleven years, according as we assume *Ϛ* to have made part of the series or not.

in weight of all the silver coins of this and the following periods, it will be seen that this difference is in keeping with the result shown by comparing the two leading groups of tetradrachms. It is true that my type No. 33 is only represented by two specimens, but their average weight is fully maintained by Miss Baldwin's two additional specimens (No. 57, p. 25, of her paper, the first of these coins being a quite unusually heavy one).

It is very difficult even to guess at the probable order of succession of the issues under discussion from a consideration of style alone, every test that is applied leading to a different and contradictory result. As to their proper place in the series, I have been content to be guided by the sequence usually observed among Greek coins subject to the exceptions demanded by the anepigraphic types Nos. 39, 39^a, 40, and 45. It will be agreed, I think, that Nos. 39-40 are later types than No. 38, and that No. 45 is later than any of them. There is a good deal to be said in favour of grouping these drachms and hemidrachms with the tetradrachms of class α , detailed below. One obvious advantage arising therefrom would be the closer association that such an arrangement would bring about between them and the earlier class of drachms with names in full, type No. 50. In fact, the evidently near relationship of these two groups is perhaps the best argument for assigning a later date to types Nos. 39-45 than that suggested by their reverses.

It will be seen that Miss Baldwin unhesitatingly pronounces in favour of a fourth-century origin for these types (see pp. 47-8 and Pl. v. 11-31 of her paper), and she may be right, but I am leaving my arrangement unaltered since I have already described it as

only tentative. On the whole, however, the fresh evidence produced by Miss Baldwin is in favour of placing some at least of these doubtful coins more or less as I am doing. The two types that she illustrates on Pl. iv under Nos. 20-1 are clearly connected by their reverses, as she points out, with the anepigraphic drachms Nos. 17-19 on the one hand, and with the practically contemporary coins showing a dolphin, Nos. 22-3, on the other. But their obverses, in my opinion, as clearly indicate a connexion with these later drachms. The comparatively large head of the Sphinx on both coins, the turban-like arrangement of its hair on No. 20, which is characteristic of the doubtful group, and to which I have called attention under my type No. 37, and the loose locks of hair on No. 21 are all more suggestive of the drachms on Miss Baldwin's Pl. v than of those among which they are placed.

Nos. 39-40. The style of these coins calls for no further remark than has already been made. It is sufficient to observe that they show a type of Sphinx different both from that of the earlier anepigraphic coins and of the signed tetradrachms. I do not feel sure that the roughened ground in the incuse square of No. 39 is artificially produced, although Miss Baldwin (p. 47) makes no exception of it in tracing the development of the artificially granulated ground.

Attention may be drawn once more to the rarity of the hemidrachm No. 40, especially as it is one of the chief features that differentiate this group from the earlier of the two classes of drachms bearing names in full.

No. 41. Of the coins with single letters those with Θ and Κ are fairly common, but those with Ε and Λ are

rare. Miss Baldwin mentions a second specimen with **E** in addition to the one I have noted, but the specimen with **Λ** appears to be unique.

No. 42 is an earlier looking type than any of the others in this group, both on account of the Sphinx, which is very like the one seen on the drachm with the dolphin symbol, type No. 38, and of the incuse square. This reverse, like the tall Sphinx, is peculiar to the two issues with **Ρ** and **Η**, the former of which is rather rare.

No. 42^b. This coin is remarkable as being the only case that I have met with of an obverse with monogram combined with the more usual granulated reverse of type No. 41, &c.

No. 43 seems to be unique. It is also interesting as exhibiting the commoner type of Sphinx on a coin with monogram. Miss Baldwin illustrates three others which had escaped me (Nos. 25-7 of her Pl. v).

No. 44. This hemidrachm, which also appears to be unique, is another case wherein the usual type of Sphinx appears in conjunction with a monogram.

The evidence of the last three types goes to prove that all the coins of this group are practically contemporaries, although I have not been able to detect any significant interchange of dies among them. Miss Baldwin only mentions one between her types 86-7, p. 30.

No. 45. The coin representing this type is the only one I have seen. It certainly has a later look, in my opinion, than any of those preceding it here, the cross-bars on the reverse having all the appearance of being ready to receive a magistrate's name. It might, in fact, be a pattern for one of the later issues.

Before passing on to the bronze it is worth while noting here that the earliest case of plating that I have come across in the Chian series belongs to the present period. In the Berlin Cabinet there is a copper coin that evidently formed the core of one of those drachms without letters, possibly type No. 39^a. It measures $\frac{13.00}{12.00}$ mm. and weighs 39.7 grains (2.57 grammes).

Nos. 46-47^a. These early bronze coins were first published by Herr A. Löbbecke in an article which will be dealt with more fully later on. The author did not attempt to assign a date to this particular part of the find that he was describing, being content to settle the time when the hoard was probably deposited, but he remarks that some of the bronze was much worn and had evidently been in circulation for a long time. Though this observation refers more particularly to twenty-nine pieces that were unrecognizable in their details, it can also be taken to cover the coins included under these four types, as all the specimens I have seen, with the exception of that illustrated **Pl. XIX. 2**, are more or less affected by wear. The coin chosen to illustrate type No. 47 [**Pl. XIX. 3**] is quite the best I know. This type, No. 46, will be recognized as presenting, in its obverse, all the characteristics of the genuine fifth-century coinage near which it is placed. In fact, the wing of the Sphinx and the clean line formed by the back of its neck, free from the fourth-century curls, are more suggestive of this early period than the obverse types of any of the drachms and hemidrachms with which it is actually grouped. The turning of the Sphinx to right in the solitary specimen I am recording under No. 46^a is most unusual. With

the exception of the electrum staters showing this position, no other coin of Chios has a Sphinx to right till we reach the large bronze issues made in the second century B.C.

Nos. 47 and 47^a are evidently later than the others, and No. 47 may very possibly be a contemporary of the tetradrachm with the name *Ἀσμενος*, but as the next period introduces us to quite a new style of bronze coin, it is more consistent on the whole to class these types with the two preceding ones. No. 47^a seems to be the latest of all, judging by the disappearance of the dotted circle from its reverse; but if that be accepted it must be noted that we have here the first instance, since the drachms just discussed, of an issue without inscription following after one on which letters had been engraved. Unfortunately, I have been unable to trace any of the eighteen pieces described in Herr Löbbecke's paper under his No. 19, and I have consequently had nothing but his description to guide me in assigning its place to the type. Otherwise it seems possible that this type might furnish the link, at present missing, between No. 47 and the earliest of the small bronze coins with magistrates' names.

Although, with the appearance of a device on the reverse, the question of fixed or loose dies now arises, I have no ground for supposing that the dies of these bronze coins were fixed. Out of eleven pieces that I have been able to examine, two show the die-position ↑↑, and one ↑←, but, as all the rest are quite irregular, it is probable that these three cases are accidental. This conclusion is in favour of the early attribution of these coins, for it will be seen later that all the

remaining bronze issues of Chios were probably struck from fixed dies.

The weights of Nos. 46-7 are fairly constant in the region of 20.52 grains (1.33 grammes), which is roughly the weight maintained by the small bronze coins of the next period.

PERIOD VII. 412-334 B.C.

It is a remarkable though perhaps not an exceptional fact that the seventy odd years following upon the defeat of the Athenians at Syracuse were, at one and the same time, some of the most disastrous in the annals of Chios in ancient times, and, throughout the greater part of their course, the richest from a numismatic point of view. There would be neither object nor profit in trying to follow here the various changes of fortune in the state after the introduction of the Spartan governor Pedaritos. Suffice it to say that between the oppression of the Spartans within, and the ravages of the Athenians along the coasts, the accumulated wealth of the two previous generations must have soon been dissipated. Each of the rival parties in the island identified itself with one of the belligerents, the oligarchs helping the Spartans to defend the citadel, and the democrats giving all possible encouragement to the Athenian raids. Almost every year saw a fresh revolution, as first one side and then the other gained the upper hand. Finally, after the crowning defeat of Aegospotami, when the last hopes of the democrats sank with the Athenian ships, and the oligarchic captains were being honoured by statues at Delphi,⁶⁰ all civic independence seems to

⁶⁰ Pausanias x. 99.

have been destroyed for a time. The names of the Chian leaders, as recorded by Pausanias, were Astykrates, Kephisokles, Hermophantos, and Hikesios. Only the last three are mentioned as a rule, and, as will appear below, two of these have also been preserved on the coinage. In establishing one of his decarchies Lysander effectually stifled both local parties, and the harmosts who followed him inaugurated a reign of terror.

Chios now shared in the misfortunes that resulted from Spartan rule all over the Aegean, and fell so low that she even lost her fleet.⁶¹ Things improved a little after the victory of Conon, but the peace of Antalcidas, and the restoration of autonomy, only meant weakness for the impoverished state. The consequence was that the island became the prey of every power that arose during the following years, and passed successively under the dominion of Spartans, Athenians, and Thebans. Then came the short-lived thalassocracy of the Carian princes, and the complete subjugation of Chios, Rhodes, and Cos by Hidrieus and Pixodarus. This occurred in 345 B.C., but in 340 Athens once more became the dominant force in Ionia. There must now have been some return again of prosperity in Chios, for we hear of her people paying a subsidy to Athens to ensure the safety of her merchants at sea.⁶² She certainly seems to have been able to re-establish a fleet, since Athenian and Chian ships are known to have fought side by side at Byzantium against Philip of Macedon.

But the recovery was only temporary. The expedition of Alexander threw everything into the melting-

⁶¹ Isocrates, *De Pace*, 98.

⁶² Demosthenes, *De Chersoneso*, 24.

pot once more, and faction raged more wildly than ever. Torn between Macedonian and Persian, and later by the rivalries of the Diadochi, it is a wonder that any trace of civilization remained when peace was at last secured under the Ptolemies.

It is worth while recalling the fact, on account of the names concerned, that, when the approach of Alexander's army was announced, Memnon persuaded the Chians to side with Darius, and the leaders of the day threw open their gates to a Persian garrison. These men were Apollonides, Athenagoras, and Phesinos. All three names are to be found on the coins of this period, and it seems justifiable to suppose that they represent these very men, though during earlier terms of office.

The only local artists belonging to the fourth century, whose names have come down to us, are the sculptors Sostratus and his son Pantias. The former name occurs on one of the drachms of the present period, but the owner can hardly have been the sculptor, as the latter only flourished about 320 B.C. Another name, borne by a Chian of note, which appears on the coinage of this century, is that of Theodorus, the Stoic philosopher, but his exact date is uncertain.

Although the silver issues which chiefly characterize it probably ceased some years previously, the Macedonian occupation makes a suitable ending for this period. This is because the bronze issues which, for reasons given below, can safely be assumed to have continued until the date of that occurrence, if not beyond it, are so closely bound up with the silver ones that it is best to preserve them all in the same category.

The coins now to be considered are distinguished

by two remarkable facts. The first is the references made to them by Thucydides and Xenophon in passages that have frequently been quoted and discussed. The second is that one of the very few finds of Chian coins, that have been scientifically described, covers practically the whole period. It seems hardly necessary to go over the ground of controversy regarding the two classic references just mentioned. There can no longer be any doubt that the expressions used both by Thucydides (viii. 101) and Xenophon (*Hell.* i. 6. 12) indicate the Chian tetradrachms of *circa* 411 and 406 B.C. The *τεσσαράκοστή Χία* of the former, and the *ἐκ Χίου πενταδραχμία* of the latter, both render certain fixed sums of Chian money in terms of the Aeginetic currency used by the inhabitants of the Peloponnesus.⁶³

The find in question was made near the village of Pityos, in the northern plain of Chios, and was published, several years afterwards, by Herr A. Löbbecke in *Zeit. für Num.*, 1887, pp. 148-57. The hoard comprised 50 silver and 175 bronze coins of different mints. Among the former were 2 drachms of Pixodarus of Caria in nearly mint state, 11 Chian drachms with-

⁶³ The expression *τεσσαράκοστή Χία* has been recognized (Head, *Hist. Num.*, i. p. 513) as the fortieth part of the Aeginetic mina, which, as we have seen, would be the equivalent of the contemporary Chian tetradrachm—9,600 grains or 622 grammes $\div 40 = 240$ grains or 15.55 grammes. The *πενταδραχμία*, about which more doubt has been expressed, is now admitted to be (Head, *ibid.*, and P. Gardner, *J. H. S.*, 1913, p. 162) not any particular coin, but a method of describing two Chian tetradrachms, i.e. a five-Aeginetic-drachms'-worth, since $96 \text{ grains or } 6.22 \text{ grammes} \times 5 = 480 \text{ grains or } 31.10 \text{ grammes}$. The Guernseyman of to-day, who uses French silver coins, but thinks in values of a local currency with English names, does practically the same thing as the above when he calls a two-franc piece a twenty-penny. He is putting a foreign denomination into terms of his own money as succinctly as possible.

out letters or symbols, 4 hemidrachms of the same class, and 4 Chian drachms bearing magistrates' names. Out of the Chian pieces concerned no record appears to have been kept of the anepigraphic drachms and hemidrachms, and I have been unable to trace them, but details of the drachms with names will be found below. There were other silver coins in the hoard of great individual interest, but without any special connexion with Chian chronology. The bronze included 149 Chian pieces, 41 of which belonged to the types described under Nos. 46-47*, and 29 were in an unrecognizable condition, as already stated. The rest, all with magistrates' names, and mostly in excellent preservation, will be found noted under types Nos. 53 and 54.

The main lesson to be derived from the find is that the vase containing the coins was probably hidden during the troublous years of the Macedonian occupation. The two drachms of Pixodarus, being in nearly mint state, afford an unimpeachable fixed point, as these things go, from which to calculate. The date of Pixodarus's reign was 341-335 B.C., and the coins of the find, therefore, cannot be much later than 334 B.C., which is the limit taken for this period. Herr Löbbecke's paper does not appear to have received the attention that it deserved, for one sees the Chian bronze coins to be described below assigned to any but their correct date in most collections.

Although there is no doubt, then, that all these bronze coins with names were issued some time during the first three quarters of the fourth century B.C., the date claimed for types Nos. 46-47* may appear excessively early in view of their presence in this find.

The fact that they formed part of a peasant's hoard some seventy years after they are supposed to have been struck might be advanced as an argument against such an attribution, in spite of their poor condition. But since the hoard also contained anepigraphic drachms and hemidrachms, belonging presumably to the types described under Nos. 39-40, this difficulty is considerably reduced.

Just as we are uncertain as to the exact date down to which the issues of tetradrachms and drachms with names were continued, so we cannot tell precisely when they began. The revolt from Athens has generally been accepted as the time, and it certainly provides us with a most plausible occasion for their introduction. The revival of the aristocratic party under Alcibiades seems to demand some such recognition, and in any case the date is a convenient landmark.

We have already seen the difficulties that attend the exact arrangement of the coins with symbols, letters, monograms, &c. There are not very many of these issues extant so far. My list, which, as I have explained, is by no means complete, comprises some 16 or 17 issues between types Nos. 35-45. Still, at present we cannot reckon with many more, even allowing for types that I have not had an opportunity of examining. If, as I have decided to place them, the drachms and hemidrachms with letters, &c., came between tetradrachm No. 37, supposing that it was the last of its class, and the first coin with a name in full, well and good. Between *circa* 435 B.C., the date suggested for the first tetradrachm issue, and 412 B.C. there are about twenty-three years, and, allowing for lost and missing types, these 16-17 issues may be

looked upon as filling the gap on the assumption that there was a fresh issue every year. But if the doubtful coins are to accompany the early tetradrachms with names, then the latter might be moved up some ten years or so. That, I think, is as far as it is prudent to go in trying to determine this question.

In proposing ten years only, instead of the whole interval available between the dates named, I am making a concession to my belief that, even if we have to sacrifice the doubtful drachms and hemidrachms, there was still a break in the tetradrachm issues. This I base chiefly upon the fact that there is a significant inferiority in the weights of even the earliest tetradrachms with names as compared with those without them. The only exception is type No. 37, and I am strongly inclined to think that, if it should be ultimately decided to banish the doubtful drachms and hemidrachms to the fourth century, this tetradrachm ought to accompany them. Then the general level of the work expended on the signed tetradrachms is, on the whole, inferior to that exhibited by types Nos. 32, 35, and even 37. The average relief of the shields, for instance, among coins with names is much lower than among those without. Here again No. 37 is an exception. Another point, and that not the least important, is that punch-striking seems to have been resumed with the introduction of names on the reverse. Whatever opinion may be held as to the accuracy of description conveyed by the terms *anvil- and punch-struck*, there can, I think, be no doubt but that a totally different method was employed in the striking of coins like Nos. 10-16 and 17-22, *Pl. XVIII*, from that used for Nos. 4-7, *Pl. XIX*. It has already been

pointed out that the early bronze pieces also follow the punch-striking method.

The silver coinage of this period seems to have consisted of tetradrachms and drachms only, no hemidrachms with magistrates' names having so far been discovered. We of course do not know whether drachms and bronze coins accompanied the issue of every tetradrachm or not, or whether the smaller coins were sometimes struck without tetradrachms, though it is highly probable that the material we possess representing these issues is only fragmentary in spite of its plentifulness.

The style of the coins deteriorates steadily throughout the period, the most noticeable failing being the gradual disappearance of the convex shield on the obverse. The last form it assumes is a plain ring border encircling the type [PL. XIX. 7]. The forelegs and paws of the Sphinx become coarser, but its hair is more elaborately arranged. Instead of the trimly dressed heads of PL. XVIII. 10 and PL. XIX. 4-5, we have a more ornate style in which one or two curls hang down behind, concealing the line of the neck, as in PL. XIX. 6, 7, 11. The first appearance of this fashion has already been noted under type No. 37, and it seems later to have served as a model for some of the best work done under the early Roman Emperors.

The evidence with regard to die-positions in the case of these tetradrachms and drachms is conflicting. On the whole I think that it is best to assume that the dies of these coins were not fixed, at any rate as far as regards the two earlier classes.

The weights show a regular decline, as may be seen from the following averages :

- Early tetradrachms without names, from last period
(4 specimens⁶⁴). 236.73 grains (15.34 grammes).
Tetradrachms with names, classes α and β
(20 specimens). 229.17 grains (14.85 grammes).
Late tetradrachms with names, class γ
(17 specimens). 207.56 grains (13.45 grammes).
Early drachms without names or symbols, from last period
(2 specimens). 58.02 grains (3.76 grammes).
Early drachms with symbols, letters, &c., from last period
(31 specimens⁶⁵). 54.80 grains (3.55 grammes).
Drachms with names, class β
(38 specimens). 55.40 grains (3.59 grammes).
Late drachms with names, class γ
(9 specimens). 52.16 grains (3.38 grammes).

The bronze coinage, of which there are two main types, shows a greater break with previous traditions than any other group that we have studied so far. There is no trace upon any of the issues of the raised convex shield on the obverse. The introduction of the word $\chi\iota\omicron\zeta$, too, is a striking innovation, notwithstanding its exceptional occurrence on some of the early didrachms. Of these two main types the smaller-sized pieces would seem to have come first, and their descent from the bronze coins ascribed to the last period is fairly evident, though perhaps not quite direct.⁶⁶ The bunch of grapes on the obverse only appears on a few issues, but it is impossible to say whether these came first or not.

⁶⁴ The two specimens of type No. 37 are not included among these, as both of them are very much below the average weight of their class, a difference that is not entirely due to wear, as has already been remarked.

⁶⁵ These 31 specimens do not include No. 26, *Brit. Mus. : Cat. Ionic, Chios*, as it is so very much worn.

⁶⁶ See remarks above under type No. 47^a. Everything points to these early bronze issues—types Nos. 46–47^a—having been kept in circulation for an unusually long time.

In the larger pieces the bunch of grapes is not seen at all, but its place is taken by a vine-wreath surrounding the reverse type, which is clearly a development of that seen on the silver coins of this period. These coins are divisible into two classes distinguished by the cross on the reverse. In the earlier one it is narrow and raised, somewhat like that on the tetradrachm [Pl. XIX. 7], but in the later it is wider and flush with the rest of the design as on the majority of the tetradrachms belonging to class γ . I have not yet seen a specimen of these later issues in sufficiently good condition to say whether the obverse type was also modified or not. It looks as if these large bronze pieces were introduced after the mint had ceased coining silver, the issue of the small ones being continued concurrently so as to provide a lower denomination. Although the weights are not more carefully regulated than in any other contemporary Greek mint, these two bronze types appear to have been struck with the object of maintaining the same relation between them as existed between the tetradrachms and drachms. The large coins weigh about 61.73 grains (4.00 grammes), and the small ones—evidently following the standard established for types Nos. 46-7—from 15.43 to 23.15 grains (1 to 1.50 grammes). This practice of striking two sizes of bronze coins evidently found favour at Chios, as will appear from the subsequent issues.

We may conclude that the pieces of larger module were first issued between 350 and 340 B.C. None of the names so far found upon them coincides with those known from either tetradrachms or drachms, although the style of the Sphinx—in the earlier class at least—

will be seen to be almost exactly the same as that of the latest tetradrachms. No specimen of the later class occurred in the Pityos find mentioned above, but, as two of the small coins with names common to both series did so occur, we are justified in including these large bronze pieces in the present period. Otherwise it might have been preferable to assign them to a date after the Macedonian occupation.

The style of the small coins is even better than that of the large, as would be expected, the preservation of the bunch of grapes and of the incuse circle on certain issues fully bearing out the suggestion that they were the first to be struck. In them, as will be seen, we meet with four names already noted on tetradrachms or drachms, and it seems fair to assume that the same magistrate is represented.

The dies of all these bronze coins seem to have been fixed, and their positions are given accordingly in the following descriptions by means of ††.

The tetradrachms, drachms, and bronze coins assigned to this period are as follows:

Class a.

48. *Obv.*—Sphinx of fully developed style seated l. on plain exergual line, sometimes missing; wing curled in conventionalized manner; hair dressed on top of head, but in more elaborate fashion than No. 32; further foreleg outlined behind nearer. In front amphora, with ball at point, surmounted by bunch of grapes hanging perpendicularly. The whole on shallow raised circular shield.

Rev.—Striated incuse square, quartered by bands of varying width, on one of which appears magistrate's name; punch-struck.

A. AEMENOS *Rev.* Striations vertical, and broken; broad cross.

22.50 mm. 230.25 grains (14.92 grammes).
Chian tetradrachm. Cabinet de France,
No. 4983. [Pl. XIX. 4.]

ΕΡΜΑΡΧΟΣ *Rev.* Striations horizontal, and
broken; broad cross (1). Striations vertical,
and broken (2).

22.50 mm. 232.1 grains (15.04 grammes). Chian
tetradrachm. Cabinet de France, No. 2001,
Coll. Waddington.

22.00 mm. 232.1 grains (15.04 grammes). Chian
tetradrachm. Berlin Cabinet.

ΘΕΟΔΩΡΟΣ *Rev.* Striations horizontal, and
broken; narrow cross.

23.75 mm. 230.6 grains (14.94 grammes). Chian
tetradrachm. Cabinet de France, No. 2002,
Coll. Waddington.

ΘΗΡΩΝ *Rev.* Striations horizontal, and
broken; broad cross.

21.75 mm. 231.9 grains (15.03 grammes). Chian
tetradrachm. Cabinet de France, No. 2003,
Coll. Waddington.

ΚΑΛΛΙΚΛΗΣ *Rev.* Striations vertical, and
regular; narrow cross.

21.25 mm. 235.1 grains (15.234 grammes).
Chian tetradrachm. Brit. Mus., No. 31,
Cat. Ionia, Chios.

22.50 mm. 218.5 grains (14.158 grammes). Chian
tetradrachm. No. 698, Sotheby's Cat., 1909,
of Sherman Benson Coll. ex Rhoussopoulos
Coll. (the weight according to cat., but it
seems light considering the condition of the
coin).

ΛΕΩΧΟΣ *Rev.* Striations horizontal, and
broken; narrow cross.

24.00 mm. 230.6 grains (14.94 grammes). Chian
tetradrachm. Vienna Cabinet. Published
Num. Zeit., 1908, p. 130.

ΡΟΣΕΙΔΙΠΡΟΣ *Rev.* Striations vertical, and
broken; narrow cross raised, and tapering in-
wards (1). Striations horizontal, and broken;
narrow cross (2).

23.00 mm. 229.5 grains (14.87 grammes). Chian tetradrachm. Brit. Mus., No. 33, Cat. Ionia, Chios.

25.00 mm. 230.1 grains (14.91 grammes). Chian tetradrachm. Cabinet de France, No. 2004, Coll. Waddington. [Pl. XIX. 5.]

Class β .

49. *Obv.*—Sphinx, &c., similar to preceding, except that the shield is very shallow, practically non-existent in some specimens, and replaced by a plain ring border in others; and that the Sphinx's hair is invariably dressed so as to show loose curls on the neck behind.

Rev.—Similar to preceding, except that the striations of the incuse square tend to become regular.

AR. **ΑΜΦΙΜΗΔΗΣ** *Rev.* Striations horizontal, and broken; broad cross.

23.00 mm. 213.6 grains (13.84 grammes). Chian tetradrachm. No. 2247 of Hirsch's Cat., 1909, of Philipson Coll. (condition bad, and weight no doubt affected by oxidization).

ΑΡΙΣΤΗΣ *Obv.* Type in ring border. *Rev.* Striations horizontal, and broken; narrow cross.

24.00 mm. 235.0 grains (15.23 grammes). Chian tetradrachm. Berlin Cabinet.

ΒΑΣΙΛΕΙΔΗΣ *Rev.* Striations horizontal, and broken; broad cross (1). Striations vertical, and broken (2).

23.00 mm. 232.0 grains (15.033 grammes). Chian tetradrachm. Brit. Mus., No. 28, Cat. Ionia, Chios. [Pl. XIX. 6.]

25.00 mm. 235.2 grains (15.24 grammes). Chian tetradrachm. Berlin Cabinet.

ΕΟΡΥΝΟΜΟΣ *Obv.* Type in ring border. *Rev.* Striations vertical, and regular; broad cross.

23.50 mm. 232.9 grains (15.09 grammes). Chian tetradrachm. Vienna Cabinet. Published *Revue Suisse*, 1905, p. 239.

ΕΡΜΟΦΑΝΤΟΣ *Rev.* Striations horizontal, and regular; broad cross (1). Striations vertical, and regular; broad cross (2).

23.25 mm. 233.95 grains (15.16 grammes). Chian tetradrachm. Vienna Cabinet.

23.00 mm. 233.95 grains (15.16 grammes). Chian tetradrachm. Berlin Cabinet.

ΗΡΑΓΟΡΗΣ *Rev.* Striations vertical, and regular; broad cross.

22.50 mm. 218.5 grains (14.158 grammes). Chian tetradrachm. Brit. Mus., No. 30, Cat. Ionia, Chios.

ΙΠΠΙΗΣ *Rev.* Striations broken; narrow cross, raised, and tapering inwards.

24.00 mm. 218.1 grains (14.126 grammes). Chian tetradrachm. Hunterian Coll., No. 4.

ΦΟΙΝΙΞ *Obv.* Type in ring border. *Rev.* Striations vertical, and broken; narrow cross, raised, and tapering inwards.

23.75 mm. 231.5 grains (15.00 grammes). Chian tetradrachm. Cabinet de France, No. 2005, Coll. Waddington. [Pl. XIX. 7.]

Class β.

50. *Obv.*—Sphinx of fully developed style seated l., generally without exergual line; wing curled in conventionalized manner; hair rolled, with loose curls hanging on neck behind; only one foreleg showing as a rule. In front amphora, with ball at point, surmounted by bunch of grapes hanging perpendicularly. The whole on shallow raised circular shield.

Rev.—Granulated incuse square quartered by bands of varying width, on one of which appears magistrate's name; punch-struck (?).

Α. **ΑΡΤΕΜΩΝ** *Rev.* Coarse granulations; narrow cross.

15.00 mm. 54.3 grains (3.52 grammes). Chian drachm. Cabinet de France, No. 2006, Coll. Waddington.

15.00 mm. 56.3 grains (3.65 grammes). Chian drachm. Berlin Cabinet.

ΓΕΡΩΞ *Rev.* Fine granulations; broad cross.

14.00 mm. 54.3 grains (3.52 grammes). Chian drachm. Berlin Cabinet. Published *Revue Suisse*, 1895, p. 306.

15.50 mm. 56.9 grains (3.69 grammes). Chian drachm. Boston Mus., U.S.A., No. 493 of Page Perkins Coll.

ΕΡΑΙΝΕ[ΤΟΞ] *Rev.* Fine granulations; broad cross.

13.50 mm. 56.9 grains (3.69 grammes). Chian drachm. Brit. Mus., No. 36, Cat. Ionia, Chios.

14.00 mm. 56.0 grains (3.63 grammes). Chian drachm. Coll. Dr. Imhoof-Blumer, 1912.

[Pl. XIX. 10.]

ΘΕΟΤΤΙΣ *Rev.* Coarse granulations; narrow cross.

15.50 mm. 54.6 grains (3.54 grammes). Chian drachm. Cabinet de France, No. 2007, Coll. Waddington. [Pl. XIX. 8.]

15.00 mm. 57.6 grains (3.73 grammes). Chian drachm. Berlin Cabinet, ex Löbbecke Coll. Published *Z. für N.*, 1887, pp. 148-57, No. 3. Name on No. 4 of A. Löbbecke's paper rendered ΘΕΥΤΤΙ[Σ]. Five other specimens known, all with ΘΕΟΤΤΙΣ.

ΙΡΡΙΑΣ *Rev.* Coarse granulations; narrow cross.

13.50 mm. 53.8 grains (3.49 grammes). Chian drachm. Brit. Mus., No. 37, Cat. Ionia, Chios.

14.75 mm. 54.3 grains (3.52 grammes). Chian drachm. Cabinet de France, No. 4991.

[Pl. XIX. 9.]

ΙΞΙΜΑ[ΧΟΞ?] *Rev.* Coarse granulations; broad cross.

15.00 mm. 56.3 grains (3.65 grammes). Chian drachm. Berlin Cabinet. Published *Kleinasiat. Münz.*, vol. i, p. 102.

15.50 mm. 57.1 grains (3.70 grammes). Chian drachm. Coll. B. Yakountchikoff.

ΣΩΣΤΡΑ[ΤΟΣ] *Rev.* Coarse granulations; broad cross.

15.00 mm. 54.4 grains (3.524 grammes). Chian drachm. Brit. Mus., No. 38, Cat. Ionia, Chios.

15.00 mm. 55.9 grains (3.62 grammes). Chian drachm. Cabinet de France, No. 4992.

ΦΑΝΟΚΛΗΣ *Rev.* Fine granulations; broad cross.

14.00 mm. 57.8 grains (3.74 grammes). Chian drachm. Berlin Cabinet ex Lobbbecke Coll. Published *Z. für N.*, 1887, pp. 148-57, No. 5.

14.00 mm. 57.6 grains (3.73 grammes). Chian drachm. Berlin Cabinet ex Lobbbecke Coll. Published *Z. für N.*, 1887, pp. 148-57, No. 6.

The final **Ξ**, though lacking on these Berlin specimens, is supplied by Egger's Sale Cat., of Prowe Coll., No. 1098, May, 1914.

ΦΗΣΙΝΟΣ *Rev.* Coarse granulations; broad cross.

14.50 mm. 53.5 grains (3.47 grammes). Chian drachm. Leake Coll., Fitzwilliam Mus., Cambridge.

15.00 mm. 57.6 grains (3.73 grammes). Chian drachm. Coll. Sir H. Weber.

Class γ.

51. *Obv.*—Sphinx of fully developed style seated l. on plain exergual line; wing curled in conventionalized manner, and the feathers indicated by coarser lines than before; hair dressed to show chignon as well as side roll with curls hanging down at back of neck; only one foreleg showing of very massive proportions. In front amphora, with pear-shaped tip, surmounted by bunch of grapes hanging perpendicularly. The whole, occasionally, in plain ring border.

Rev.—Striated incuse square quartered by broad bands, on one of which magistrate's name; punch-struck.

Α. ΔΗΜΟΚΡΑΤΗΣ *Rev.* Striations vertical, and regular.

22.50 mm. 227.6 grains (14.75 grammes). Chian tetradrachm. Brit. Mus., No. 29, Cat. Ionia, Chios.

ΗΡΙΑΝΟΣ *Rev.* Striations horizontal, and regular (1). Striations vertical, wide, and regular (2). Has a coarsely granulated ground (3).

20.00 mm. 211.6 grains (13.71 grammes). Chian tetradrachm. Cabinet de France, No. 4985.

[Pl. XIX. 11.]

20.50 mm. 205.3 grains (13.30 grammes). Chian tetradrachm. McClean Coll., Fitzwilliam Mus., Cambridge.

20.25 mm. 199.7 grains (12.94 grammes). Chian tetradrachm. My collection ex Prowe Coll., No. 1096, Egger's Cat., 1914.

Not rare.

ΚΗΦΙΣΟΚΡΙΤ[ΟΣ] *Rev.* Striations vertical, wide, and regular (1). *Obv.* Type in ring border. *Rev.* Striations horizontal, and regular (2). *Obv.* Type in ring border. *Rev.* Striations vertical, and broken; raised cross (3).

21.25 mm. 202.3 grains (13.11 grammes). Chian tetradrachm. Brit. Mus., No. 32, Cat. Ionia, Chios.

23.00 mm. 209.9 grains (13.61 grammes). Chian tetradrachm. Hunterian Coll., No. 5.

21.50 mm. 208.5 grains (13.51 grammes). Chian tetradrachm. Berlin Cabinet.

Not rare.

ΣΚΥΜΝΟΣ *Rev.* Striations vertical, and regular. *Obv.* Type in ring border.

22.25 mm. 212.4 grains (13.76 grammes). Chian tetradrachm. Cabinet de France, No. 4988.

Class γ.

52. *Obv.*—Identical with preceding, but no plain ring border, and exergual line sometimes missing.

Rev.—As preceding.

A. **ΗΡΙΔΑΝΟΣ** *Rev.* Striations vertical, wide, and regular.

16.50 mm. 52.5 grains (3.40 grammes). Chian drachm. Brit. Mus., No. 34, Cat. Ionia, Chios.

14.50 mm. 51.0 grains (3.30 grammes). Chian drachm. Vienna Cabinet.

ΚΗΦΙΞΟΚΡΙΤΟΣ *Rev.* Striations vertical, and regular.

14.00 mm. 53.2 grains (3.45 grammes). Chian drachm. Cabinet de France, No. 4987.

[Pl. XIX. 12.]

14.00 mm. 52.5 grains (3.40 grammes). Chian drachm. Coll. Sir H. Weber.

ΣΟΙΜΥΧΣ *Rev.* Striations vertical, and regular; raised cross (1).

ΞΚΥΜΝΟΣ *Rev.* Striations horizontal, wide, and regular (2).

13.50 mm. 55.2 grains (3.58 grammes). Chian drachm. Brit. Mus., No. 35, Cat. Ionia, Chios.

14.50 mm. 51.0 grains (3.30 grammes). Chian drachm. McClean Coll., Fitzwilliam Mus., Cambridge. [Pl. XIX. 13.]

Mionnet's *Médailles grecques*, vol. vi, p. 389, No. 6, records a tetradrachm, measuring 22.00 mm., with magistrate's name **ΛΥΚΙΔΕΟΣ**. I have been unable to trace this coin, and therefore cannot assign it to its class among those given above. The form of the name is suspicious, and suggests a mutilated original.

53. *Obv.*—Sphinx similar to type No. 50—especially as regards the wing—seated l., with or without a plain exergual line. In front of it, sometimes, a bunch of grapes.

Rev.—Amphora, with pear-shaped tip, having on the one side of it a magistrate's name, and on the other ΧΙΟΞ or ΧΙΟΣ. Incuse circle of varying depth, and punch-struck, but often absent.

Æ. ΑΘΗΝΑ[ΓΟΡΑΣ] *Obv.* Grapes. *Rev.* Slightly concave field. ΧΙΟΞ.

↑↑ 11.00 mm. 18.7 grains (1.21 grammes). Berlin Cabinet. Published *Z. für N.*, 1887, pp. 148–57, No. 7.

↑↑ 13.00 mm. 17.6 grains (1.14 grammes). Berlin Cabinet. Published *Z. für N.*, 1887, pp. 148–57, No. 7.

↑↓ 11.25 mm. 21.5 grains (1.39 grammes). My collection ex Lambros Coll., No. 743 (part), Hirsch's Cat., 1910.

ΑΜΦΙΛΟ --- *Obv.* No grapes. *Rev.* Slightly concave field. ΧΙΟΞ.

↑↓ 12.00 mm. Weight? In private hands at Chios.

ΑΡΟΛΛΩ[ΝΙΔΗΣ] *Obv.* Grapes. *Rev.* ΧΙΟΞ.

↑↑ 11.00 mm. 18.5 grains (1.20 grammes). Berlin Cabinet. Published *Z. für N.*, 1887, pp. 148–57, No. 8.

↑↑ 12.00 mm. 19.6 grains (1.27 grammes). Berlin Cabinet. Published *Z. für N.*, 1887, pp. 148–57, No. 8.

↑↓ 10.50 mm. Weight? Collection in Public Library at Chios.

ΑΣΜΕΝ[ΟΣ] *Obv.* No grapes. Small Sphinx. *Rev.* Concave field. ΧΙΟΞ.

↑↑⁶⁷ 10.00 mm. 13.12 grains (0.85 gramme). Athens Cabinet.

ΙΗΝΩΝ *Obv.* No grapes. *Rev.* No incuse. ΧΙΟΣ.

⁶⁷ Whenever a coin fails to show either the upright ↑, inverted ↓, or transverse ↔, positions in its reverse, I am representing it thus ↗. Any positions but those mentioned probably mean that the dies were either not fixed at all or had become displaced.

↑↑ 11.00 mm. 19.2 grains (1.24 grammes). Berlin Cabinet. Published *Z. für N.*, 1887, pp. 148-57, No. 9.

↑↑ 12.00 mm. 21.6 grains (1.40 grammes). Berlin Cabinet. Published *Z. für N.*, 1887, pp. 148-57, No. 9. [Pl. XIX. 16.]

ΗΓΗΞ[ΙΡΡΟΣ] *Obv.* No grapes. *Rev.* Slightly concave field. ΧΙΟΞ.

↑↑ 12.00 mm. 22.8 grains (1.48 grammes). Berlin Cabinet. Published *Z. für N.*, 1887, pp. 148-57, No. 10.

↑↑ 12.50 mm. 18.9 grains (1.22 grammes). Berlin Cabinet. Published *Z. für N.*, 1887, pp. 148-57, No. 10.

Η]ΡΙΑΝ[ΟΣ] *Obv.* No grapes. Small Sphinx. *Rev.* Shallow incuse circle. ΧΙΟΞ.

↑↑ 9.75 mm. 19.6 grains (1.27 grammes). Brit. Mus., No. 40, Cat. Ionia, Chios.
[Pl. XIX. 15.]

ΙΡΡΙΑΣ *Obv.* grapes. *Rev.* ΧΙΟΣ.

↑↑ 11.50 mm. 19.3 grains (1.25 grammes). Berlin Cabinet. Published *Z. für N.*, 1887, pp. 148-57, No. 11.

↑↑ 12.00 mm. 19.9 grains (1.29 grammes). Berlin Cabinet. Published *Z. für N.*, 1887, pp. 148-57, No. 11.

ΙΞΧΙΜΑ[ΧΟΣ?] *Obv.* grapes. *Rev.* Incuse circle. ΧΙΟΞ.

↑↑ 11.50 mm. 23.15 grains (1.50 grammes). Berlin Cabinet. Published *Z. für N.*, 1887, pp. 148-57, No. 12.

↑↑ 11.50 mm. 21.1 grains (1.37 grammes). Berlin Cabinet. Published *Z. für N.*, 1887, pp. 148-57, No. 12.

↑↑ 11.50 mm. 15.1 grains (0.978 gramme). Brit. Mus. Collection, uncatalogued.
[Pl. XIX. 14.]

ΛΥΚΟΡ[ΜΑΣ] or [ΤΑΣ] *Obv.* No grapes. *Rev.* No incuse. ΧΙΟΞ.

↑↑ 11.50 mm. 18.9 grains (1.22 grammes). Berlin Cabinet. Published *Z. für N.*, 1887, pp. 148-57, No. 13.

↑↑ 12.00 mm. 18.5 grains (1.20 grammes). Berlin Cabinet. Published *Z. für N.*, 1887, pp. 148-57, No. 13.

ΠΕΙΣΙ - - - *Obv.* No grapes. *Rev.* No incuse. ΧΙΟΣ. (Löbbecke renders name ΠΕΞΙ, but the first Ι is certain.)

↑↑ 11.25 mm. 20.5 grains (1.33 grammes). Berlin Cabinet. Published *Z. für N.*, 1887, pp. 148-57, No. 14.

↑↑ 11.00 mm. 18.1 grains (1.17 grammes). Berlin Cabinet. Published *Z. für N.*, 1887, pp. 148-57, No. 14.

↑↑ 11.50 mm. 17.7 grains (1.15 grammes). Athens Cabinet.

ΦΙΛΤΗΞ *Obv.* No grapes. *Rev.* No incuse (1 and 3). Incuse circle (2). ΧΙΟΣ.

↑← 11.00 mm. 29.6 grains (1.92 grammes). Berlin Cabinet. Published *Z. für N.*, 1887, pp. 148-57, No. 15.

↑↑ 12.00 mm. 21.6 grains (1.40 grammes). Berlin Cabinet. Published *Z. für N.*, 1887, pp. 148-57, No. 15.

↑↑ 11.75 mm. 12.4 grains (0.80 gramme). My collection.

ΦΙΤΤΑΚ[ΟΣ] *Obv.* No grapes. Small Sphinx. *Rev.* No incuse (1 and 2). Shallow incuse circle (3). ΧΙΟΣ.

↑↑ 11.00 mm. 18.5 grains (1.20 grammes). Berlin Cabinet. Published *Z. für N.*, 1887, pp. 148-57, No. 16.

↑↑ 10.25 mm. 21.6 grains (1.40 grammes). Berlin Cabinet. Published *Z. für N.*, 1887, pp. 148-57, No. 16.

↑↑ 10.50 mm. 22.4 grains (1.45 grammes). Athens Cabinet. (The K of name is clear on this specimen, though Löbbecke read one as Ξ.)

53^a. *Obv.*—Same as preceding.

Rev.—Amphora between bunch of grapes l. and $\chi\iota\omicron\varsigma$ r.
No magistrate's name. No incuse circle.

↑↑ \mathcal{A} . 9.50 mm. In private hands at Chios.

54. *Obv.*—Sphinx similar to type No. 51, seated l. on plain exergual line.

Rev.—Vine-wreath tied below, within which two narrow raised bands crosswise, on the horizontal one magistrate's name, and on the vertical one $\chi\iota\omicron\varsigma$.

\mathcal{A} . $\mathcal{A}\Gamma\Gamma\mathcal{E}$ - - -

↑↑ 17.00 mm. 56.9 grains (3.69 grammes). Berlin Cabinet. Published *Z. für N.*, 1887, pp. 148-57, No. 20. [Pl. XIX. 17.]

↑↑ 17.00 mm. 62.8 grains (4.07 grammes). Berlin Cabinet. Published *Z. für N.*, 1887, pp. 148-57, No. 20.

$\iota\kappa\epsilon\varsigma\iota\omicron\varsigma$

↑↑ 17.00 mm. 56.5 grains (3.66 grammes). Berlin Cabinet. Published *Z. für N.*, 1887, pp. 148-57, No. 21.

↑↑ 16.00 mm. 61.3 grains (3.97 grammes). Cabinet de France, No. 5009^a.

$\iota\varsigma\tau\iota[\chi\iota\omicron\varsigma?]$

↑↑ 17.00 mm. 58.7 grains (3.80 grammes). Berlin Cabinet. Published *Z. für N.*, 1887, pp. 148-57, No. 23.

55. *Obv.*—Sphinx like preceding, but of more careless execution in some specimens.

Rev.—Vine-wreath tied below, within which two broad bands crosswise, flush with rest of design, on the horizontal one magistrate's name, and on the vertical one $\chi\iota\omicron\varsigma$ or $\chi\iota\omicron\sigma$.

\mathcal{A} . $\iota\eta\eta\eta\eta$ *Rev.* $\chi\iota\omicron\sigma$.

↑↑ 16.50 mm. 69.0 grains (4.47 grammes). Brit. Mus., uncatalogued, from Lawson, Smyrna.

$\eta\Gamma\eta\varsigma\iota\eta[\rho\omicron\varsigma]$ *Rev.* $\chi\iota\omicron\varsigma$.

↑↑ 16.75 mm. 53.8 grains (3.49 grammes). My collection ex Whittall Coll. (?).

ΑΑΝΔΑΡΙ - - - Rev. ΧΙΟΣ.

↑↑ 17.25 mm. 51.8 grains (3.36 grammes). My collection ex Sir H. Weber Coll.

[Pl. XIX. 18.]

↑↑ 17.00 mm. 51.5 grains (3.34 grammes). Berlin Cabinet. Published *Kleinasiat. Münz.*, i, p. 103, No. 5.

ΠΟΛΥΜΗ - - - Rev. ΧΙΟΣ.

↑↑ 15.00 mm. 62.9 grains (4.08 grammes). Cabinet de France, No. 5111. [Pl. XIX. 19.]

↑↑ 16.25 mm. 52.8 grains (3.42 grammes). Berlin Cabinet.

ΤΙΜΟΛ - - - ? Rev. ?

↑↑ 14.00 mm. 33.1 grains (2.14 grammes). Brit. Mus., No. 43, Cat. Ionia, Chios.

The mutilated names ΑΓΑ - - and ΟΧ - - may be added to this group (see Appendix II), since coins of the next type, No. 56* with ΕΡΜΩΝΑΞ, are found struck over them.

- ΙΟΣΚΟΥ - from a similar coin with ΦΙΛΤΗΣ in the British Museum may safely be restored to [Δ]ΙΟΣΚΟΥ. [ΡΙΔΗΞ].

Mionnet's *Médailles grecques*, vol. vi, p. 389, No. 14, records one of these bronze coins measuring 15.00 mm. with magistrate's name ΑΝΑΞΑΙ - - -. Kofod Whitte, perhaps describing the same coin, *De Rebus Chiorum*, &c., p. 81, No. 71, reads the name ΑΝΑ . . ΓΟ - - -. The name might possibly be restored as ΑΝΑΞΑΓΟ[ΡΑΣ], but as I have been unable to trace the coin it is impossible to say to which of the above two classes it should belong.

No. 48. The coins of this type are very rare, and

the list given above includes all specimens known to me. Enough has already been said about the style of these coins, and about their place in the Chian series. With regard to the names they record, it has already been remarked that a Stoic philosopher named *Θεόδωρος* is known to have been a native of Chios, and *Ποσειδίππος* occurs on a grave stele found on the site of the ancient citadel. *Λέωχος* is unrecorded either by Pape, or Fick and Bechtel; it may be a pet name for *Λεωχάρης*. The coins with *Θεόδωρος* and *Θήρων* are from the same obverse die, but two quite different dies, both obverse and reverse, were used for the two coins with the name *Ποσειδίππος*; see Miss Baldwin's Pl. iv. 29 and Pl. v. 1. I may be wrong in attributing the issues with *Καλλικλῆς* to this class instead of to the next. Miss Baldwin, it will be noticed, places them very low down on her list, which seems to aim at being chronological.

The forms of the letters employed throughout are quite consistent, *Μ*, *Π*, and *Σ* always taking the forms *Μ*, *Π*, and *Ξ*, but *Ν* varies from *Ν* to *Ν*.

No. 49. These coins are just as rare as the preceding, and the remarks already made in their case apply here as well. The differences in style and treatment between this and the last type can be clearly seen from the illustrations on Pl. XIX. 4-7. In addition to the other distinctions already noted the striations of the reverse field tend to become regular, although there is a good deal of variety in the designs, of a minor kind. Altogether the main characteristic of this class is the fact that it presents a greater variety of design either than its predecessor or than the class that follows it. The specimens showing

a plain ring border in place of the convex shield have not been kept separate, although they would appear to be the latest.⁶⁸

The *Ἑρμόφαντος*, whose name is found on one of these tetradrachms, may have been one of the Chian generals to whom statues were erected at Delphi after the battle of Aegospotami. The characteristically Ionic names *Εόρύνωμος*, *Ἡραγόρης*, and *Ἰππίης* may be noted, as none of them in this Ionic form occurs in either Pape's, or Fick and Bechtel's works. There is no change in the letters since the last type, but Φ is apparently always represented Φ.

The coins from Berlin with the names *Βασιλείδης* and *Ἑρμόφαντος* are from the same obverse die, which die is of quite a different type from that used for the tetradrachm with the former name in the British Museum [Pl. XIX. 6]. The Sphinx on the coin with Φοῖνιξ [Pl. XIX. 7] is of a special type, to which attention has already been drawn in the cases of the coins illustrated Pl. XVIII. 16 and Pl. XVIII. 21,⁶⁹ and which will be met with again in the drachms of the next series [Pl. XIX. 8]. This is only one more proof of the very close connexion that exists between the coins of these two classes with names in full and those of the previous period with single letters and monograms.

No. 50. The correct placing of these coins is as

⁶⁸ From now onwards it will no longer be necessary to divide the coins into so many different types as heretofore, in view of the broader distinctions rendered possible by grouping a certain number of magistrates' names under a given type. The minor variations need then only be referred to as above.

⁶⁹ See remarks under types Nos. 42 and 43.

much a puzzle as that of the group described under types Nos. 39-45. They are not so rare as the tetradrachms of classes α and β , those bearing the names $\Theta\epsilon\delta\tau\tau\iota\varsigma$, $\text{'}\text{I}\pi\pi\acute{\iota}\alpha\varsigma$, and $\Sigma\acute{\omega}\sigma\tau\rho\alpha[\tau\omicron\varsigma]$, in particular, being met with fairly frequently. The specimens with the finely granulated reverses [Pl. XIX. 10], and the names $\text{'}\text{E}\pi\alpha\acute{\iota}\nu\epsilon[\tau\omicron\varsigma]$, $\Gamma\acute{\epsilon}\rho\omega\varsigma$, and $\Phi\alpha\nu\omicron\kappa\lambda\eta\varsigma$, are the rarest, and may perhaps be considered the latest of their class.

I owe this attribution to a suggestion of Miss Baldwin's, p. 48. My first impression of this sub-type, based on the style of its lettering, which never shows the later forms occurring on the issues with coarse granulations, was that it came at the head of its class. There is very little difference between the various obverses concerned, but the peculiar ground of the reverses on these particular issues certainly comes better at the end of the series than between the drachms with letters, &c., and the bulk of this class, as would have had to be the case otherwise.

In arranging these drachms under the heading of class β , it is not intended to convey the impression that they are supposed to have formed part of the same issues as the tetradrachms just described. It is rather that they fit in better as companions to the tetradrachms of class β than to those of class α , while class γ , with a distinctive style of its own, is the only one of the three in which given tetradrachms and drachms can unhesitatingly be ascribed to the same magistrate. Besides, class γ is undoubtedly later than these drachms. They really stand apart, more so even than the drachms with single letters and monograms, which at least can claim a possible connexion with the tetradrachms of class α . But in the case of these coins

the names found on them are distinct from those occurring on any of the tetradrachms, with the possible exception of *Ἰππίας* and *Ἰππίας*, the latter belonging to the tetradrachms of class β . It is by no means certain, however, that these two names should be taken as referring to the same person. It may be, of course, that this absence of connexion with other groups is only another case of material that is lacking, but it is curious.

Then, in the matter of style, with the exception of the tall Sphinx [Pl. XIX. 8], which is common to all three groups, the obverses of the present coins bear a much greater resemblance to the drachms with single letters, &c., than to any of the tetradrachms. The two groups of drachms seem to follow each other closely. The Sphinx's wing, on all varieties of this group, is of a later type than on the drachms with letters, as would be expected, and the amphora, on a few specimens, exhibits the pear-shaped tip that was generally adopted for class γ and subsequent coins, and may consequently be regarded as a sign of comparative lateness. The pear-shaped tip is certainly never found on the drachms with letters, nor on the tetradrachms of classes α and β . The raised shield, on the other hand, is always present here in a more or less degraded form, and I have never noticed the plain ring border that has been referred to in the case of some of the class β tetradrachms as probably the last stage it reached before disappearing altogether. Also, the weights of this group differ very little from those of the earlier one, the averages shown in the table above being, if anything, in favour of the drachms with names. It is difficult to separate them, and yet

the conservative rule I have chosen to follow demands it. The absence of a hemidrachm from the series with names has already been noted, and marks a break that may have been of longer duration than mere appearances suggest. Another noteworthy point, supporting the attribution of this type No. 50 to at least as late a date as the tetradrachms of class β , is that the lettering on the coins seems to indicate a period of transition. Looked at as a whole, the lettering is less archaic than that of any of the tetradrachms—even those of class γ , with their accompanying drachms—and of some of the bronze. \mathbf{M} takes the two forms \mathbf{M} and \mathbf{M} , and \mathbf{N} is always \mathbf{N} , $\mathbf{\Pi}$ is always $\mathbf{\Pi}$, but $\mathbf{\Sigma}$ is as often $\mathbf{\Sigma}$ as $\mathbf{\Sigma}$, Φ has the form already noted Φ . It is a pity that none of these test letters occurs on the drachms and hemidrachms of types Nos. 39–45.

The curiously worked field of the reverses is also a distinctive feature of this type. It can be traced back without a break to the artificially granulated ground of type No. 37. It is never seen on the tetradrachms of classes α and β , which followed a separate line of development, though no doubt derived from the same source. It appears only once, so far as I have observed, on the tetradrachms of class γ , but, as will be noted when they come to be discussed, it was probably an archaism in that case. This artificially granulated surface is peculiar to these drachms of Chios, the nearest approach in any other Greek series being the similarly treated reverses of certain issues at Teos.⁷⁰ The proximity of the two cities naturally adds to the interest of the resemblance.

⁷⁰ Brit. Mus., Nos. 24–5, Cat. Ionia, Teos.

Of the names supplied by the group, *Σώστρατος*, as stated above, is known to Chian history through the fourth-century sculptor of that name, and *Φησίως* (accent according to Pape, ed. 1875) was one of the magnates who threw open the gates of the citadel to Memnon and his Persians. *Γέρως* is a name unknown to Greek records, but there seems no reason to doubt the reading of the coins. The initial *Γ*, which has been thought uncertain, is quite clear on one of the specimens at Berlin. *Ἰσχίμαχος*, which seems a safe restoration for *ΙΞΙΜΑ*, is also new. It may be a weak form for *Ἰσχόμαχος*. It is interesting to note the alternative forms *Θεώττις* and *Θεύττις*, in this case undoubtedly struck by the same magistrate.

There remains the question of the method used in striking. Though we find occasional instances of deep punch-struck incuses like the one illustrated **PL XIX. 8**, about half these pieces show much the same type of reverse as the drachms with single letters, &c., which were described as anvil-struck.

Nos. 51-2. Some of the tetradrachms now to be considered are the most plentiful that have come down to us. The specimen in the British Museum collection with *Δημοκράτης* and that from Paris with *Σκύμνος* are not known elsewhere, but the other two varieties of the class bearing the names *Ἡριδανός* and *Κηφισόκριτος* look as if they had been issued fairly freely for this denomination.

It is a little doubtful whether the coin with *Δημοκράτης* should be included in this class or not, as, its condition being not very good, it is difficult to distinguish details, and its weight is rather high. But the way in which the Sphinx's head is drawn, thrust

forward, and the shape of its wing, are both characteristic of the type, while it is struck on the small module that is one of its chief features. The smaller module and the total absence of the raised shield as a background to the obverse are the principal differences between this class and its predecessors, apart from the reduced weight. This last point is especially noticeable both in tetradrachms and drachms, and marks off the coins of this class as the latest silver issues of the fourth century.

This question of the approximate position to be assigned to the present group among the fourth-century issues constitutes the most important difference between Miss Baldwin's and my conclusions with regard to this period. It will be seen from her Pl. vi that Miss Baldwin places all the drachms of what I call type No. 50 after these tetradrachms and drachms of types Nos. 51-2. I cannot agree with this for the reasons given here and under type No. 50. I have tried to point out the difficulty of separating types Nos. 39-45, if taken as a whole, from the earliest coins of type No. 50 by more than a few years. I have also agreed that the three issues with fine granulations would come better at the end than at the beginning of the type No. 50 series, as otherwise the sequence would have been broken. But by interpolating the coins of types Nos. 51-2, as on Miss Baldwin's Pl. vi. 1-12 before 13-26, an unnecessary difficulty seems to have been created.

It is no doubt curious that the Pityos find should not have contained any of these coins, if, as I believe, they are later than the drachms with *Θεῶττις* and *Φανοκλῆς*, which formed part of the hoard, but their absence

hardly affords a basis for argument as to the relative ages of the two types.

A greater uniformity in the obverse types than in the coins of class β or even of class α is also to be observed. The hair of the Sphinx's head is more elaborately dressed than on any of the preceding coins, the knot or chignon at the back being only seen here, and on the bronze issues summarized under type No. 54. The ground of the reverse is almost invariably ruled with vertical or horizontal lines carefully drawn and spaced, and easily distinguished from the broken striations or closely packed straight lines of the α and β classes. The only two exceptions to this, that I have noticed, are the tetradrachm with *Ἡριδανός*, already mentioned, showing a granulated ground of extra-conventional type (see Miss Baldwin's fig. 13, p. 32), and the same denomination from Berlin with *Κηφισόκριτος*, on which the irregular striations of the older style are to be seen. This coin also has a ring-border round the obverse, and is very likely one of the earliest of its class.

None of the names encountered calls for any special remark, though it is interesting to note *Σκύμνος*, a well-known Chian name in later days, appearing thus early. The lettering, although somewhat roughly executed, shows a tendency to archaism that has encouraged me to attribute the granulated reverse of the tetradrachm just mentioned to the same cause. Considering that these coins are undoubtedly later than the drachms of type No. 50, it is strange that we never meet with the forms **M** or **Σ** upon them that have already been noted on the latter, while even the obsolescent **N** is occasionally seen. There is also the

drachm with Σκύμνος in the British Museum, on which the name is written retrograde, the only case of retrograde lettering that I have observed in the whole Chian series.⁷¹ This must be another piece of archaism, and an interesting parallel with it is afforded by a quarter drachm of Pixodarus in the British Museum (*Brit. Mus. Cat.: Caria*, p. 185, No. 15, and Pl. xxviii. 15), on which the dynast's name is written retrograde between the rays of a star. Considering the influence of the Carian princes in Chios from 345 to 340 B.C., something more than a coincidence seems called for to explain this. I am illustrating the variety of this drachm with the name Σκύμνος from Cambridge [Pl. XIX. 13], as it seems to me to mark the last stage of degeneration reached by these fourth-century silver coins, and it may well be the latest representative of the old Chian silver standard.

The tetradrachm with Κηφισόκριτος in the Hunterian collection (No. 5 of Dr. Macdonald's Catalogue) and the unique specimen with Σκύμνος are from the same obverse die with a ring border. Though the name Κηφισόκριτος always appears in an abbreviated form on the tetradrachms it can be safely restored from the drachms, where, curiously enough, it is written at full length in spite of the more restricted space. All coins of this class are much more distinctly punch-struck than the drachms of class β.

No. 53. We owe these small bronze coins almost entirely to the Pityos find, and they are all rather rare.

⁷¹ Exception must be made in favour of a few cases of single letters; the Σ, for instance, on type No. 47^a, and the numerous occurrences of Γ in Period IX.

They are very neatly executed, and the lettering is fine and clear. They fall naturally into three sub-types that are represented by the specimens illustrated on **Pl. XIX. 14-16**. The first shows a bunch of grapes in front of the Sphinx and an incuse circle reverse. It has already been observed that it is impossible to say whether coins with the bunch of grapes are earlier than those without it or not, but the type is placed first here for the sake of continuity. No. 2 is of smaller module than either of the others, and exhibits a small Sphinx of a design practically identical with that of the tetradrachms, which cannot be said of Nos. 1 and 3. It looks earlier than they in spite of not showing the bunch of grapes. The reverse also has an incuse circle. In both these sub-types the letters **M** and **Σ** appear under the forms **Μ** and **Ξ**, but **N** has the late form. No. 3 is of rather larger and thinner module than the preceding, always shows the later form of **Σ**, and has no incuse circle. Attention may be drawn to the pear-shaped tip of the amphora plainly shown on Nos. 2 and 3. The Sphinx's hair is dressed in a style intermediate between the tetradrachms of classes *α* and *γ*.

Two names of historical interest are furnished by the group if some small latitude in restoration be allowed. *Ἀθηναγόρας* seems a fair assumption from **ΑΘΗΝΑ** - - since the only other known names that would fit the case are *Ἀθήναιος* and *Ἀθηναδής*, while *Ἀθηναγόρας* happens to be the name of one of the three oligarchs who are said to have betrayed their country to the Persians. *Φησίως* we have already met with on the drachms of type No. 50, and the third, *Ἀπολλωνίδης*, may be restored from **ΑΠΟΛΛΩ** - - of this

series, though not with quite the same confidence as *Ἀθηναγόρας* from **ΑΘΗΝΑ** --.

I have only seen one specimen with the name **ΑΜΦΙΛΟ** --, and one again with **ΑΣΜΕΝ** --. The latter no doubt stands for *Ἀσμενος*, but probably refers to a later magistrate than the one who signed the tetradrachm of class *α*.

Ἡγήσιππος (or more likely *Ἡγήσιππος* at Chios) is a safe restoration of **ΗΓΗΞ** -- on account of the large piece with **ΗΓΗΞΙΡ** --- included among the coins of type No. 55.

Ἡριδαν[ός] may very likely be the same magistrate whose name we have met already under types Nos. 51-2. *Ἰππίας* and *Ἰσχύμα[χος]* are already known through the drachms of type No. 50. The rest call for no special remark, except *Φιττακ[ός]*, which is an uncommon form, and probably an alternative for *Πιττακός* (see Pape) or *Ψιττακός*.

These coins show the same irregularity in the forms of the letters employed as the drachms of type No. 50. The three specimens illustrated on **Pl. XIX** afford excellent examples of nearly all the variations to which attention has been drawn above.

No. 53^a. This is the second instance to be recorded of a coin without a magistrate's name following or accompanying others of the same type bearing names (see above in reference to type No. 47^a).

No. 54. The coins of this type are also principally known to us through the Pityos find, and are rare.

Their obverse type, as may be seen from **Pl. XIX. 17**, is remarkably like that of the tetradrachms and drachms of class *γ*. The raised cross on the reverse was not a convenient design for preserving the inscriptions of

the coins, as, in the absence of either incuse square or circle, the letters quickly became worn. Out of thirteen specimens known to me, five, which under more favourable circumstances might have preserved their legends, are quite illegible.

The name *Ἰκέσιος* may record the magistracy, though somewhat late in life, of one of the Chian generals whose statues were seen at Delphi by Pausanias. Of the other two names occurring on coins of this type **ΑΓΓΕ** -- is not susceptible of certain restoration, but I am suggesting *Ἰστιάϊος* for **ΙΞΤΙ** -- on account of the prevalence of that name at Chios and other cities of Ionia. The lettering on these coins, like that on the tetradrachms and drachms of class γ, appears to consist of the more archaic forms only, though ξ is the only test letter provided by the specimens so far discovered.

No. 55. This type is clearly later than the last, and, as suggested above, may even have been struck after the limit assigned to the present period. The coins are rare. The style of the Sphinx appears to vary, but as all the known specimens are in poor condition it is not possible to classify them. I am illustrating two specimens in order to show different types of Sphinx [Pl. XIX. 18-19] and the varied forms of the letters.

The name *Ζήνων* has already been noted on a small coin of type No. 53, also *Ἠγήσιππος*. **ΛΑΝΔΑΡΙ** -- looks, at first sight, like a mutilated inscription, so little does it suggest a Greek name,⁷² but the letters are perfectly distinct as Pl. XIX. 18 shows. The specimen in Berlin, which is the only other one I have seen, is not so clear, and might be read **ΜΑΝΔΑΟΣ**, but

⁷² See R. Münterberg's *Beamtennamen*, p. 46.

that does not help matters. The reading **TIMOA** - - on No. 43 of Brit. Mus. Cat.: Ionia, Chios, is very uncertain.

The lettering in general shows the transitional character of types Nos. 50 and 53, and is well exemplified on the pieces illustrated.

Some of these coins have a slightly concave field not to be observed on the previous type.

J. MAVROGORDATO.

(To be continued.)

APPENDIX I

*List of magistrates' names belonging to coins of Period VII
showing the denominations on which they occur.*

	tetr.	dr.	bronze.		tetr.	dr.	bronze.
'Αγα	—	—	γ	'Ιεΐσιος . . .	—	—	β
'Αγγε	—	—	β	'Ιππίας . . .	—	β	α
'Αθηνα[γύραι] .	—	—	α	'Ιππής . . .	β	—	—
'Αμφιλο	—	—	α	'Ισσι[αῖος] . .	—	—	β
'Αμφιμήτης . .	β	—	—	'Ισχύμα[χος] .	—	β	α
'Απολλας[νίδης] .	—	—	α	Καλλικλῆς . .	α	—	—
'Αρίστης	β	—	—	Κηφισόκροτος .	γ	γ	—
'Αρτίμων	—	β	—	Λανθαρι . . .	—	—	γ
'ΑΣμενος	α	—	α	Λίωχος	α	—	—
Βασιλείδης . . .	β	—	—	Λυκόβ[ματος-ται]	—	—	α
Γέρας	—	β	—	'Οχ	—	—	γ
Δημοκράτης . .	γ	—	—	Πεισι	—	—	α
[Διοσκοιν[νίδης]	—	—	γ	Πολυμη	—	—	γ
Ευρέτομον . . .	β	—	—	Ποσειδιππος . .	α	—	—
'Επαίνε[τος] . . .	—	β	—	Σκύμνοι	γ	γ	—
'Ερμαρχος	α	—	—	Σώστρο[τος] . .	—	β	—
'Ερμίφαντος . .	β	—	—	Φαροκλῆς . . .	—	β	—
Ζήνων	—	—	α and γ	Φησίκοι	—	β	—
'Ηγήσιπ[τος] . . .	—	—	α and γ	Φύλπη	—	—	α
'Ηραγόρης	β	—	—	Φιττας[ύς] . . .	—	—	α
'Ηριδανός	γ	γ	α	Φοίνεξ	β	—	—
Θεύδαρος	α	—	—	'Αναξαγο	—	—	β or γ
Θεύττις or Θεύττις	—	β	—	ΛΥΚΙΔΕΩΣ	(γ)	—	—
Θήρων	α	—	—	ΤΙΜΟΛ	—	—	γ

The letters α, β, γ indicate, in the case of the silver, the three different classes into which these coins are divided above; and in that of the bronze, types Nos. 53, 54, and 55 respectively.

APPENDIX II

Summary of *Pityos* hoard from Herr A. Lohbeck's paper in *Zeitschrift für Numismatik*, 1887, pp. 148-57.

Class of Coin.	Obverse.	Reverse.	References.	No. of Coins in hoard.
Ephesian tetradrachm	ΕΦ Βεο	Perseus of Stag and Date palm	<i>B. M. Cat.</i> 30-52 variety	1
Erythraean Α	Head of Heracles r.	ΕΡΥ Club and Bow	<i>B. M. Cat.</i> 66-82	26
Milesian tetradrachms	Head of Apollo l.	Lion standing l.	{ type of following } { <i>B. M. Cat.</i> 53-67 }	2
drachms	"	"	{ <i>B. M. Cat.</i> 17-18 }	11
Chian drachms	Sphinx l.	Quartered incuse	{ type of drachms }	11
" hemidrachms	"	ΘΕΟΤΤΙΣ	Lohbeck's No. 3	4
" drachm	"	ΘΕΥΤΤ	" 4	1
" "	"	ΦΑΝΟΚΛΗ.	" 5 & 6	2
" drachms	"	ΑΘΗΝΑ --	" 7	9
Α, 10-12 mm.	"	ΑΠΟΛΛΩ --	" 8	6
" "	"	ΙΗΝΩΝ	" 9	10
" "	"	ΗΓΗΣ --	" 10	13
" "	"	ΙΡΙΔΙΑΣ	" 11	6
" "	"	ΙΣΧΙΜΑ --	" 12	8
				33, 34 & 78 Α

APPENDIX II (continued).

<i>Class of Coin.</i>	<i>Obverse.</i>	<i>Reverse.</i>	<i>Reference.</i>	<i>No. of Coins in hoard.</i>
Chian \mathcal{A} . 10-12 mm.	Sphinx l.	ΛΥΚΟΡ -- ΠΕΙΣΙ -- ΦΙΛΑΤΗΣ ΦΙΤΤΑ -- Α l. ξ r. in dots No letters " and no dots ΑΓΓΕ -- on cross ΙΚΕΣΙΟΣ ΙΚΕΣΙ . . ΙΞΤΙ -- Badly preserved	Lohbeck's No. 18 " 14 " 15 " 16 " 17 " 18 " 19 " 20 " 21 " 22 " 23	6 6 3 3 5 18 18 2 1 3 3 29
" 10-17 mm.	"	Grab and Club in dotted sq. Female head l. Rose	B. M. Cat 13-14 " 19, var.	1 1 1
Coan tetradrachm	Head of Heracles l.	Zeus r., in front B	"	1
" drachm	" r.	"	"	1
Rhodian half-drachm	Head of Helios facing	"	"	1
Mausolus, tetradrachm	Head of Apollo	"	"	11
" drachms	"	"	"	2
Pixodarus	"	"	"	2
				17 A & 97 \mathcal{A} .
				Total = 50 A & 175 \mathcal{A} .

XVII.

NOTES ON THE COINAGE AND SILVER CURRENCY IN ROMAN BRITAIN FROM VALENTINIAN I TO CONSTANTINE III.

(SEE PLATE XX.)

§ 1. ON A LARGE HOARD OF LATE ROMAN SILVER COINS FROM THE NORTH MENDIP, INCLUDING SILIQUAE STRUCK AT AUGUSTA (LONDINIUM).

It is well known that the West of England—especially the Mendips and adjoining region—has been the scene of repeated finds of considerable hoards of late Roman coins, mostly silver, dating from the last half of the fourth century of our era or the first years of the fifth. The most recent is that from Grovely Wood, Wilts, an account of which was laid before this Society by Mr. Hill in 1906,¹ consisting of silver coins from Constantius II to Arcadius.

A general survey of the Somerset hoards has been given by Professor Haverfield in the *Victoria County History*,² and several have already been referred to by my father in the account of the East Harptree find which he laid before this Society in 1888. It contained 1,496 silver pieces, the dates of which extend from

¹ *Nam. Chron.*, 1906, pp. 329 seqq.

² *Victoria County History*, "Somerset," i, pp. 354, 355.

Constantine the Great's time to that of Gratian.³ My father there made the following statement: "A far larger hoard of silver coins belonging to a somewhat later date was discovered somewhere in the same neighbourhood above twenty years ago and came into my possession. The list of types that it comprised I hope on some future occasion to communicate to the Society."

Dis aliter placitum. Two unique siliquae of Magnus Maximus from this find, referring to the London mint under the name of Augusta, have been already published by my father in the *Numismatic Chronicle* in 1867.⁴ But his intention of giving a full account of this discovery was never carried out.

Since any reasons for reticence as to the matter no longer exist, I feel in a special way called on to publish from my father's papers a catalogue of this hoard, the sorting and preliminary listing of which was, indeed, one of my own earliest numismatic exercises. As a large part of the hoard also passed into my own hands, I have been able to supply additional materials as to the weights of the various classes of coins there represented.

Of the provenance of the hoard it is impossible to say more than that according to my own traditional information it was found in the North Mendip region not far from Bristol. Here it may be convenient to refer to it as the "North Mendip Hoard". It is by far the largest of the finds of this West Country region, the number of the silver pieces discovered amounting to 2,042. The earliest specimen in the hoard is a single

³ J. Evans, "On a Hoard of Roman Coins found at East Harptree, near Bristol," *Num. Chron.*, 1888, pp. 22-46.

⁴ *Num. Chron.*, 1867 (N.S. vii), pp. 62, 331. See below, p. 438.

coin of Constans—a double siliqua or so-called “medallion”,—while the latest record the Quinquennalia of Honorius. The great bulk of the hoard consisted of siliquae, 2,003 in number, but there were 31 of these larger silver pieces and 10 smaller coins, identified below with half-siliquae.

A full catalogue of the coins will be found in the succeeding Section. The following table gives an analysis of the coins according to the Emperors represented. The first column (A) includes the double siliquae or so-called “medallions”; the second (B) the siliquae; and (C) silver coins of lesser denomination. Besides the coins with imperial titles there are three (Nos. 98, 99) from the Treves mint with **TR** and the head of Roma on the obverse, and **X** and **XV** within a wreath on the reverse.

SUMMARY ANALYSIS OF NORTH MENDIP HOARD.

A. “Medallions” (Double Siliquae). B. Siliquae. C. Half-Siliquae.

	A.	B.	C.	TOTAL.
Constans	1			1
Constantius II	8	186		194
Constantius Gallus	1			1
Julian II	1	456		457
Jovian	1	15		16
Valentinian I	5	57		62
Valens	4	296		300
Procopius		2		2
Gratian	4	233	3	240
Valentinian II	3	255	1	259
Theodosius I	2	175	1	178
Magnus Maximus		227	1	228
Victor		30	1	31
Eugenius	1	23		24
Honorius		12		12
Arcadius		36		36
Roma			3	3
	31	2,003	10	2,044

Among the later coins of the hoard those of Eugenius, who usurped in the West A. D. 392-4, are well represented. Seven pieces celebrate the Decennalia of Arcadius, which were due on Jan. 15, 393. Of Honorius, who was made Augustus on Jan. 10 of that year, there are only twelve coins, but ten of these from the Milan mint celebrate his Quinquennalia, which would have taken place on Jan. 9, 397. There is evidence that at this period these celebrations took place with strict punctuality.⁵ On the whole, therefore, we may safely conclude that the present hoard was deposited in the last years of the fourth century.

The distribution of the coins according to mints, as far as they can be attributed, is as follows:

Antioch	30	Aquileia	78
Nikomedia	10	Milan	75
Constantinople ⁶	9	Treves	1,087
Carthage	1	Arles	387
Thessalonica	4	Lyons	254
Sirmium	6	Augusta (Londinium)	2
Siscia	18		
Rome	57		2,018

It will be seen that over half the coins belong to the Treves mint, while, *longo intervallo*, Arles and Lyons take the second and third place. The three Italian

⁵ It is known, for instance, that the Quinquennalia of Theodosius II, who was raised to the dignity of Augustus in January, 402, were celebrated in 407 on the completion of the fifth year of his reign (*Chron. Pasch.*, p. 309 B *ἐπὶ τοῦτων τῶν ἑπτῶν ἐπετελίσθη κνίκωννάλια Θεοδοσίου νέου Αὐγούστου ἐν ΚΠ. μηνὶ Αὐθενίῳ πρὸ γ' ἰδῶν Ἰανουαρίου*). So too the Tricennalia of Honorius took place at their proper date in 492 (*Marcellinus Comes* "Honorio XIII et Theodosio X Cons.").

⁶ Coins with C.A., C.B., C.F., C.Δ., C.Z., C.P.F., and the exceptional C.P.S. of No. 43 are here attributed to Constantinople. Those showing CON and CONST in various combinations are given to Arles (Constantina). The coin of Valens (No. 45) with CONCM is enigmatic.

mints, Rome, Aquileia, and Milan, are fairly represented, and, after them, Antioch. Of the London mint under its new name there were but two specimens.⁷

That coins with the London mint mark should at this time be very rare even in British hoards is sufficiently explained by special circumstances of the case referred to below. Our knowledge of the contents of many of these hoards is however unfortunately very imperfect, and further information might appreciably add to the number of specimens of coins of this period from the London mint.

This hoard, as will be seen, was specially rich in the so-called "medallions" here identified with double siliquae or "miliarensia". Among these that of Theodosius, given under No. 76, seems to be unique. It reads **VICTORIA AVGVSTORVM — RE**, and Victory is seen bearing a trophy and palm-branch. Among the siliquae several pieces referring to Vota occur for the first time. Among these are No. 42, Valens **VOT. X. MVLT. XV—TR PS**, Nos. 86 and 87, Magnus Maximus (described below), struck at Augusta, and Nos. 95, 96, Arcadius **VOT V MVLT X—MD PS** and **VOT X MVLT XV**. The coins reading **PERPETVETAS**, with the rayed phoenix on a globe, whether siliquae or of the lesser module, here identified with half-siliquae (**PL. XX, Fig. 11**), are of great rarity.⁸ The specimens from the present find are of Gratian (No. 52) and Theodosius (No. 76), and another is known of Valentinian II.⁹ The phoenix on the globe

⁷ Nos. 86, 87 below. Cf. p. 438, and **PL. XX, Figs. 4, 6**. The coins were presented by my father to the British Museum.

⁸ See below, p. 472.

⁹ Cohen, viii, p. 142, No. 25.

is the well-known type of **AETERNITAS**, and as such already appears on an aureus struck to commemorate the death of Trajan.¹ By Hadrian, on another aureus, it was taken as a symbol of the Golden Age, and accompanied by the legend **SAEC(VLVM) AVR(EVM)**.¹¹ Later on, on the fine bronze medallion of Constantine, we see Crispus receiving from his father the same secular symbol.¹² The head of the phoenix is now rayed, and so too on a well-known series of bronze coins of Constans and Constantius we see it, either alone or in the Emperor's hand, accompanied by the legend **FEL(ICIVM) TEMP(ORVM) REPARATIO**. With the reintroduction of this type by Gratian may be compared the legend **GLORIA NOVI SAECVLI** that appears on a series of his coins in all metals.

The most interesting of the coins for the first time made known to us by the North Mendip hoard are the two siliquae (Nos. 86, 87), already referred to, struck from the London mint under its new name of Augusta [**Pl. XX, Figs. 4, 6**]. They are both of Magnus Maximus. The reverse of No. 86 is **VICTORIA AVGG**, Victory marching left bearing wreath and palm-branch; in ex. **AVG PS** (i.e. **AVG(VSTAE)** (argenteum) **P(V)S(V)-LATVM**).¹³ That of No. 87 is **VOT V MVLT V** within a wreath; in ex. **AVG**. This latter piece, which celebrates the Quinquennalia of Maximus, should have been struck in A.D. 388, the year of his death, though

¹⁰ Cohen, ii, p. 87, Nos. 658, 659.

¹¹ *Ib.*, p. 216, No. 1321. A youthful figure, perhaps personifying the Golden Age and standing within the arch of the Zodiac, holds a phoenix on a globe.

¹² Cohen, *M. R.*, vii, p. 259. The accompanying inscription is **GLORIA SAECVLI VIRTVS CAESS**.

¹³ See below, p. 497.

it is possible that, as in other contemporary cases, his Vota were anticipated.

Special attention is also called below (§ 5) to a class of coins of lighter weight and smaller modules which are here claimed to represent half-siliquæ.

§ 2. CATALOGUE OF COINS OF NORTH MENDIP HOARD.

(*Med.* = Double Siliqua. *Half-S.* = Half-Siliqua. The other coins are Siliquæ.)

CONSTANS.

1. *Obv.*—**FL IVL CONSTANS P F AVG** Diademed bust r. with paludamentum.

Rev.—**TRIVMFATOR GENTIVM BARBARVM** In exergue **TES** Military figure standing r., in right hand a standard, the left resting on a shield (Coh. 115) (70 gr.)
Med. 1

CONSTANTIUS II.

2. *Obv.*—**FL IVL CONSTANTIVS AVG** Diademed and draped bust r.

Rev.—**CONSTANTIVS AVG** In ex. **SMTR**
Four military standards (Coh. 5) (70 gr.)
Med. 1

3. *Obv.*—**D N CONSTANTIVS P F AVG** Diademed and draped bust r.

Rev.—**FELICITAS ROMANORVM** In ex. **SIRM**
Two military figures standing beneath arch (Coh. 74) (65½ gr.)
Med. 1

4. *Obv.*—**D N CONSTANTIVS P F AVG** Bust r. as last.

Rev.—**VIRTVS EXERCITVS** In ex. **CA** Military figure standing with spear and shield (Coh. 326) (67½ gr.)
Med. 1

5. *Obv.*—As No. 3.

Rev.—**VIRTVS EXERCITVS** Military figure standing with spear and shield (not in Cohen); in ex. **P CON** (69 gr.) *Med.* 1

6. As last; in ex. **C B** (64 gr.) *Med.* 1

R (65 gr.) *Med.* 2

TES (67 gr.) *Med.* 1

7. *Obv.*—As No. 3.

Rev.—**VICTORIA DD NN AVG** Victory l. with wreath and palm-branch (Coh. 229); in ex. **LVG** 3

8. *Obv.*—As No. 3.

Rev.—**VOTIS V MVLTVS X** in wreath (Coh. 338); in ex. **S CON** 1

T CON 1

9. *Obv.*—As No. 3.

Rev.—**VOTIS XXX MVLTVS XXXX** in wreath (Coh. 342); in ex. **ANT** 6

P CON 66

S CON 46

LVG 56

SIRM 2

SMN 5

Total, Constantius II 194

CONSTANTIUS GALLUS.

10. *Obv.*—**D N FL CL CONSTANTIVS NOB CAES** Bare-headed draped bust r.

Rev.—**FELICITAS ROMANORVM** Two emperors facing under an archway (Coh. 79); in ex. **SIRM?** Badly preserved (58 gr.) *Med.* 1

JULIAN II.

11. *Obv.*—**D N FL CL IVLIANVS P F AVG** Diademed and draped bearded bust r.

Rev.—**VIRTVS EXERCITVS** Military figure standing with spear and shield, above shield eagle with wreath in beak; in ex. **P CONST** (Coh. 72) (62 gr.) *Med.* 1

12. *Obv.*—**FL CL IVLIANVS P P AVG** Beardless
diademed and draped bust r.
Rev.—**VICTORIA DD NN AVG** Victory stand-
ing l. with wreath and palm (Coh. 58); in
ex. **LVG** 3
13. *Obv.*—**D N IVLIANVS NOB CAES** Bare and
beardless draped bust r.
Rev.—Star of eight points in wreath (Coh. 172);
in ex. **ANT** 1
14. *Obv.*—**D N IVLIANVS NOB CAES** Bust as
last.
Rev.—**VOTIS V MVLTI X** in wreath (Coh.
154); in ex. **T CON** 24
Uncertain 1
15. *Obv.*—**D N CL IVLIANVS AVG** Beardless
bust as last.
VOTIS V MVLTI X in wreath (Coh.
158); in ex. **P CON** 1
S CON 4
T CON 10
TR 19
TR 8
Uncertain 5
16. *Obv.*—**FL CL IVLIANVS PP AVG** Bust as
before.
Rev.—As last (Coh. 163, &c.); in ex. **LVG** 60
P LVG 20
S LVG 17
Uncertain 4
One barbarous reads **FL CL IVLIANV P**
P AVG
17. *Obv.*—**FL CL IVLIANVS AVG** Bust as before.
Rev.—As last; in ex. **TR** 1

¹⁴ Three read **VOTIS IV**.

18. *Obv.*—D N IVLIANVS P F AVG Bust as before.

<i>Rev.</i> —As last ; in ex.	P CON	14
	S CON	18
	T CON	26
	LVG	1

19. *Obv.*—D N FL CL IVLIANVS P F AVG Bust as before.

<i>Rev.</i> —VOTIS V MVLTI XX in wreath ; no exergual mark. Barbarous.		1
---	--	---

20. *Obv.*—FL CL IVLIANVS PP AVG Bust as before.

<i>Rev.</i> —VOTIS X MVLTI XX in wreath (Coh. 146) ; in ex.	LVG	2
	P LVG	13
	S LVG	7

21. *Obv.*—D N FL CL IVLIANVS P F AVG Bust as before.

<i>Rev.</i> —VOT X MVLTI XX in wreath (var. of Coh. 146) ; in ex.	P LVG	7
	S LVG	4
	S LVGD	1

22. *Obv.*—As last. Bust slightly bearded.

<i>Rev.</i> —As last ; in ex.	P CONST	32
	S CONST	17
	T CONST	25

23. *Obv.*—As last. Bust more bearded.

<i>Rev.</i> —As last ; in ex.	P CONST	28
	S CONST	30
	T CONST	26
Barbarous	P LVG	1
	Uncertain	10

24. *Obv.*—FL CL IVLIANVS P F AVG Bearded bust.

<i>Rev.</i> —As last ; in ex.	ANT	12
-------------------------------	-----	----

25. *Obv.*—D N IVLIANVS P F AVG Beardless bust.
Rev.—VOTIS XXX MVLTIS XXXX in wreath;
 in ex. P CON 2
26. *Obv.*—D N FL CL IVLIANVS P F AVG
 Bearded bust.
Rev.—VOT +++ MVLT ++; in ex. 2NOC9 1
 Barbarous reverse.

Total, Julian II 457

JOVIAN.

27. *Obv.*—D N IOVIANVS P F AVG Diademed
 and draped bust r.
Rev.—VOT V MVLT X in wreath (Coh. 33);
 in ex. ANT 1
 P CONST 4
 S CONST 3
 T CONST 4
¹⁵ SMN 3

28. *Obv.*—As No. 27.

- Rev.*—GLORIA ROMANORVM Emperor under
 arch (Coh. 4) (63½ gr.) ANT Med. 1

Total, Jovian 16

VALENTINIAN I.

29. *Obv.*—D N VALENTINIANVS P F AVG Dia-
 demed and draped bust r.
Rev.—VIRTVS EXERCITVS Emperor standing
 looking l., holding labarum and shield
 (Coh. 58); in ex. SMTR (66¾ gr.) Med. 1
 TRPS (61½ gr.) Med. 1
 TES (62½ gr.) Med. 1

30. *Obv.*—As last.

- Rev.*—VICTORIA AVGVSTORVM Victory r.
 inscribing VOT V MVLT X on a shield
 placed on a cippus (Coh. 51); in ex.
 R P (68 gr.) Med. 1
 SMTR (65½ gr.) Med. 1

¹⁵ One reads IOVANVS.

31. *Obv.*—As last.

Rev.—**VRBS ROMA** Rome seated on cuirass l.
(Coh. 81); in ex. **LVG** 1
LVG PS 12
LVG S 2

32. *Obv.*—As last.

Rev.—As last, but Rome seated in curule chair
(Coh. 83); in ex. **RP** 6
R*P 1
R*Q 1
TRPS 19
Uncertain 1

33. *Obv.*—As last.

Rev.—**VOT V MVL T X** in wreath (Coh. 70); in
ex. **R T** 8

34. *Obv.*—As last.

Rev.—**VOTIS V MVL TIS X** in wreath (Coh.
79); in ex. **SIRM** 2

35. *Obv.*—As last.

Rev.—**VOT XV MVL T XX**; in ex. **SISCPS** 2

36. *Obv.*—As last.

Rev.—**VOT X MVL T XX** in wreath; in ex.
ANT 1
SISCP 1

Total, Valentinian I 62

VALENS.

37. *Obv.*—**D N VALENS P F AVG** Diademed and
draped bust r.

Rev.—**GLORIA ROMANORVM** Valens and
Valentinian facing, each holding a labarum
and a globe (Coh. 18); in ex.
*** SIS** (67 gr.) *Med.* 1

38. *Obv.*—As last.

Rev.—**VICTORIA AVGVSTORVM** Victory r.
inscribing **VOT V MVL T X** on a buckler
standing on a cippus, her l. foot on
a globe (Coh. 60); in ex.
SMTR (68 gr.) *Med.* 1

39. *Obv.*—As last.

Rev.—**VIRTVS EXERCITVS** Valens standing
 looking to l., holding labarum and buckler
 (Coh. 71); in ex. **SISCP** (66½ gr.) *Med.* 1
TRPS (67 gr.) *Med.* 1

 40. *Obv.*—As last.

Rev.—**VOT V MVLT X** in wreath (Coh. 91);
 in ex. **LVG** 1
SMN 1
RP 2
RB 6
RT 1
RQ 1
TES 1

 41. *Obv.*—As last.

Rev.—**VOT**
V in wreath (Coh. 88); in ex. **CB** 1
CF 1
XC F 1
CPT 1
CZ 1

 42. *Obv.*—As last.

Rev.—**VOT X MVLT XV** in wreath (not in
 Cohen); in ex. **TRPS** 3

 43. *Obv.*—As last.

Rev.—**VOT X MVLT XX** in wreath (Coh. 96);
 in ex. **ANT** 1
ANT 2
ANTX 1
ANT.. 2
ANTT 2
C^PRSQ 1
P LVG 1

 44. *Obv.*—As last.

Rev.—**VOTIS XV MVLT XX** in wreath (Coh.
 98); in ex. **SISC P S** 2

45. *Obv.*—As last.

Rev.—**VOTIS XX MVLT XXX** in wreath (Coh. 101); in ex. **CONCM** 1

46. *Obv.*—As last.

Rev.—**VRBS ROMA** Rome seated in curule chair
(Coh. 108); in ex. Plain 1
AQPS 3
Star in field " 1
RQ 5
TRPS 214
P LVG 2

47. *Obv.*—As last.

Rev.—**VRBS ROMA** Rome seated on cuirass
(Coh. 110); in ex. **TRPS.** 3
TRPS 29
Barbarous imitations, Rome in chair 3
Barbarous imitations, Rome in chair **RQ** 1
Total, Valens 300

PROCOPIUS.

48. *Obv.*—**D N PROCOPIVS P F AVG** Diademed
and draped bust r.

Rev.—**VOT V** in wreath (Coh. 14); in ex. **C Δ** 1
SMN 1

Total, Procopius 2

GRATIAN.

49. *Obv.*—**D N GRATIANVS P F AVG** Diademed
and draped bust r.

Rev.—**VIRTVS EXERCITVS** Emperor stand-
ing looking r., l. hand resting on shield,
in r. labarum (Coh. 52); in ex.
TRPS (67 gr.) *Med.* 1
AQPS (68 gr.) *Med.* 1
SISCPS (67 gr.) *Med.* 1

50. *Obv.*—As last.

Rev.—**VOT V MVL T X** in wreath (ep. Coh. 63);
in ex. **SMKAP** (68½ gr.) *Med.* 1

51. *Obv.*—As last.

Rev.—**CONCORDIA AVGGG** Constantinople
seated facing, resting her foot on a prow,
holding a sceptre and a cornucopiae (Coh.
6); in ex. **LVGPS** 1
TRPS 1

52. *Obv.*—As last.

Rev.—**PERPETVETAS** Phoenix l. on globe (Coh.
27); in ex. **TRPS** *Half-S.* 1

53. *Obv.*—As last.

Rev.—**VICTORIA AVGG** Victory standing l.
with wreath and palm (Coh. 36); in ex. **AQPS** 1

54. *Obv.*—As last.

Rev.—**VICTORIA AVGGG** Victory as last (not
in Cohen); in ex. **RB** *Half-S.* 1

55. *Obv.*—As last.

Rev.—**VIRTVS ROMANORVM** Rome seated
holding globe and sceptre (Coh. 56); in ex.
AQPS 9
TRPS 28
TRPS *Half-S.* 1
LVGPS 2

56. *Obv.*—As last.

Rev.—**VOT X MVL T XV** in wreath (Coh. 68);
in ex. **TRPS** 1

57. *Obv.*—As last.

Rev.—**VOT XV MVL T XX** in wreath (Coh. 72);
in ex. **SISCPZ** 4
TR 1
TRPS 1

58. *Obv.*—As last.

Rev.—**VRBS ROMA** Rome seated on armour
 (Coh. 87); in ex. **AQPS** 2
 Star in field " 10
LVGPS 4
TRPS 29
TRPS. 2

59. *Obv.*—As last.

Rev.—As last, but Rome seated on curule chair
 (Coh. 86); in ex. **RB** 2
RE 2
RXP 1
RXT 3
RXQ 2
TRPS 127

Total, Gratian 240

VALENTINIAN II.

60. *Obv.*—**D N VALENTINIANVS P P AVG**
 Young diademed and draped bust r.

Rev.—**GLORIA ROMANORVM** Valentinian
 standing, looking l., holding standard, left
 arm resting on buckler (Coh. 18); in ex.
LVGPS (59½ gr.) *Med.* 1

61. *Obv.*—**D N VALENTINIANVS P F AVG**
 Young bust as last.

Rev.—**VIRTVSEXERCITVS** Valentinian stand-
 ing l., holding standard, his l. arm resting
 on buckler (Coh. 8); in ex.
TRPS (67 gr.) *Med.* 1

62. *Obv.*—**D N VALENTINIANVS IVN P F AVG**
 Bust as last.

Rev.—As last; in ex. **AQPS** (69 gr.) *Med.* 1

63. *Obv.*

Rev.—**VICTORIA AVGGG.** Victory l. with
 wreath and palm (Coh. 40); in ex.
AQPS 6
LVGPS 4
TRP 2
TRPS 129

64.	<i>Obv.</i> —D N VALENTINIANVS P F AVG Bust as last.		
	<i>Rev.</i> —As last (Coh. 41); in ex.	TRPS	2
65.	<i>Obv.</i> —As last.		
	<i>Rev.</i> —As last (Coh. 42); in ex.	R P Half-S.	1
66.	<i>Obv.</i> —As No. 60.		
	<i>Rev.</i> —VIRTVS ROMANORVM Rome seated l., on arms holding Victory and spear (Coh. 61); in ex.	TRPS	48
67.	<i>Obv.</i> —As No. 60.		
	<i>Rev.</i> —As last, but Rome seated facing looking l. (Coh. 60); in ex.	AQPS	8
68.	<i>Obv.</i> —As No. 62.		
	<i>Rev.</i> —VOTIS V MVLT X in wreath (Coh. 66); in ex.	TRPS	1
69.	<i>Obv.</i> —As No. 60.		
	<i>Rev.</i> —As last (Coh. 66); in ex. Var.	SISCPS	2
70.	<i>Obv.</i> —As No. 60.		
	<i>Rev.</i> —VOT X MVLT XX in wreath (Coh. 71); in ex.	MDPS TES	2 1
71.	<i>Obv.</i> —As No. 60.		
	<i>Rev.</i> —VRBS ROMA Rome seated l., holding Vic- tory and spear (Coh. 76, 78); in ex.	AQPS LVGP LVGPS LVGS LVG RXB TRPS	1 3 10 1 1 3 7
72.	<i>Obv.</i> —As No. 62.		
	<i>Rev.</i> —As last; in ex. ¹⁰	AQPS TRPS	17 7
Total, Valentinian II			259

¹⁰ Star in field.

THEODOSIUS I.

73. *Obv.*—**D N THEODOSIVS P F AVG** Diademed
and draped bust r.
Rev.—**VICTORIA AVGVSTORVM** Victory
bearing trophy and palm-branch, leading
captive to r. (not in Cohen); in ex.
RE (80 gr.) *Med.* 1
74. *Obv.*—As No. 73.
Rev.—**VIRTVS EXERCITVS** Emperor standing
facing, looking l., in r. hand standard, l.
resting on buckler (Coh. 55); in ex.
TRPS (66½ gr.) *Med.* 1
75. *Obv.*—As No. 73.
Rev.—**CONCORDIA AVGGG** Constantinople
seated (Coh. 4); in ex. **TRPS** 18
AQPS 1
76. *Obv.*—As No. 73.
Rev.—**PERPETVETAS** Phoenix to l. on globe
(Coh. 26); in ex. **TRPS** *Half-S.* 1
77. *Obv.*—As No. 73.
Rev.—**VIRTVS ROMANORVM** Rome seated
on arms l. (Coh. 57); in ex. **LVGPS** 1
MDPS 8
TRPS 109
78. *Obv.*—As No. 73.
Rev.—As last, but Rome seated facing (Coh. 59);
in ex. **AQPS** 7
TRPS 7
Barbarous 1
79. *Obv.*—As No. 73.
Rev.—**VOT V MVL T X** in wreath (Coh. 64); in
ex. **SISCPS** 4
80. *Obv.*—As No. 73.
Rev.—**VOT X MVL T XX** in wreath (Coh. 67);
in ex. **CONS** 1
MDPS 3

81. *Obv.*—As No. 73.

Rev.—**VRBS ROMA** Rome seated on arms (Coh. 72); in ex.
LVGP 1
LVGPS 4
LVGS 2
TRPS 1

82. *Obv.*—As No. 73.

Rev.—As last, but Rome seated on chair (Coh. 71); in ex.
R*P 4
RXB 1
R*E 1
 Barbarous 1

Total, Theodosius I 178

MAGNUS MAXIMUS.

83. *Obv.*—**D N MAG MAXIMVS P F AVG** Diademmed and draped bust.

Rev.—**VIRTVS ROMANORVM** Rome seated facing (Coh. 20); in ex.
AQPS 3
MDPS 8
TRPS 209
TRPS *Half-S.* 1
TPRS 1

84. *Obv.*—As No. 83.

Rev.—**CONCORDIA AVGG** Constantinople seated (Coh. 1); in ex. **TRPS** 3

85. *Obv.*—As No. 83.

Rev.—**VICTORIA AVGVSTORVM** Victory l. (Coh. 16); in ex. **AQPS** 1

86. *Obv.*—As No. 83.

Rev.—**VICTORIA AVGG.** Victory (*N. C.*, *N. S.*, vii, p. 62); in ex. **AVGPS** *Pl. XX*, Fig. 4. 1

87. *Obv.*—As No. 83.

Rev.—**VOT V MVLT X** in wreath (*N. C.*, *N. S.*, vii, p. 331); in ex. **AVG** *Pl. XX*, Fig. 6. 1

Total, Magnus Maximus 228

VICTOR.

88. <i>Obv.</i> —	DN FL VICTOR P F AVG	Diademed and draped bust r.	
<i>Rev.</i> —	VIRTVS ROMANORVM	Rome seated facing (Coh. 6); in ex.	
		AQPS	4
		MDPS	17
		TPRS	4
	TRPS	(1 <i>Half-S.</i>)	6
			<hr/>
Total, Victor			31

EUGENIUS.

89. <i>Obv.</i> —	DN EVGENIVS P F AVG	Diademed and draped bust r.	
<i>Rev.</i> —	VIRTVS EXERCITVS	Emperor standing l. with r. hand holding standard, the l. resting on buckler (Coh. 13); in ex.	
	TRPS	(65½ gr.) <i>Med.</i>	1
90. <i>Obv.</i> —	As No. 89.		
<i>Rev.</i> —	VIRTVS ROMANORVM	Rome seated (Coh. 14); in ex.	
		MDPS	7
		TRPS	8
91. <i>Obv.</i> —	As No. 89.		
<i>Rev.</i> —	VRBS ROMA	Rome seated l. (Coh. 18); in ex.	
		LVGPS	8
			<hr/>
Total, Eugenius			24

HONORIUS.

92. <i>Obv.</i> —	D N HONORIVS P F AVG	Diademed and draped bust r.	
<i>Rev.</i> —	VIRTVS ROMANORVM	Rome seated on arms l. (Coh. 59); in ex.	
		MDPS	2
93. <i>Obv.</i> —	As No. 92.		
<i>Rev.</i> —	VOT V MVLX	in wreath (Coh. 63); in ex.	
		MDPS	10
			<hr/>
Total, Honorius			12

ARCADIUS.

94. <i>Obv.</i> —D N ARCADIVS P F AVG	Diademed and draped bust r.		
<i>Rev.</i> —VIRTVS ROMANORVM	Rome seated l. (Sabatier 27); in ex.	AQPS	2
		MDPS	2
		TRPS	12
95. <i>Obv.</i> —As last.			
<i>Rev.</i> —VOT V MVLT X	in wreath; in ex.	MDPS	9
96. <i>Obv.</i> —As last (not in Sabatier).			
<i>Rev.</i> —VOT X MVLT XV	in wreath; in ex.	MDPS	7
97. <i>Obv.</i> —As last (not in Sabatier).			
<i>Rev.</i> —VRBS ROMA	Rome seated on arms l.; in ex.	TRPS	4
Total, Arcadius			36

ROMA.

98. <i>Obv.</i> —Head of Roma l.			
<i>Rev.</i> —X	in wreath; in ex.	TR	Half-S. 2
99. <i>Obv.</i> —As last.			
<i>Rev.</i> —XV	in wreath; in ex.	TR	Half-S. 1
Total, 'Roma'			3
TOTAL OF HOARD			2044

§ 3. THE DOUBLE SILIQUAE OR MILIARENSIA.

There were in the present hoard 31 larger silver pieces or so-called "medallions", of the following Emperors and mints:

Constans (Thessalonica)	1
Constantius II (Constantinople 2, Thessalonica 1, Sirmium 1, Rome 2, Treves 1, Arles 1)	8
Constantius Gallus (Sirmium)	1
Julian (Antioch)	1
Jovian (Antioch)	1
Valentinian I (Rome 1, Treves 4).	5
Valens (Siscia 2, Treves 2)	4
Gratian (Siscia 1, Aquileia 1, Treves 1, Car- thage 1)	4
Valentinian II (Lyons 1, Aquileia 1, Treves 1)	3
Theodosius I (Rome 1, Treves 1).	2
Eugenius (Treves)	1
	<hr/> 81

Of these, 28 well-preserved specimens give the following metrological results:

Average Weight.	Maximum.	Minimum.
4.2 grm.	5.18 grm.	3.98 grm.
(c. 65 gr.)	(c. 80 gr.)	(c. 61.5 gr.)

The average weight in the case of 18 similar "medallions" from the Harptree hoard¹⁷ is in close agreement with this:

Average.	Maximum.	Minimum.
4.227 grm.	4.536 grm.	3.823 grm.
(65.25 gr.)	(70.5 gr.)	(59 gr.)

That in the case of these larger pieces, which evidently had a less circulation than the siliquae, the weight should have been somewhat higher in proportion is only what might have been expected. But, in spite of this tendency, the relation of the larger to the

¹⁷ Thanks to the kindness of Professor Oman, I am able to add three more "medallions" from this hoard to those described by my father (*Num. Chron.*, 1888, pp. 38 seqq.). These are Valens, *Virtus Exercitus* **TES**, wt. 65 gr. (Coh. 72); **SISCP**, wt. 65.5 gr. (Coh. 71); Valentinian II, do. **TRPS**, wt. 67.5 gr. (Coh. 58).

smaller coin is clear. These so-called "medallions", with an average weight of about 4.2 grammes, must certainly be taken to be the doubles of the smaller pieces weighing one with another about 2 grammes. In other words, we have here to deal with double siliquae.

The siliquae, as we see, were tarified at 24 to a gold solidus, of which five had the legal value of a silver pound. As money of account they were thus legally reckoned as 120 to a pound in spite of their deficient weight. The double siliquae would therefore represent a sixtieth of a pound, or a gold value equivalent to 5 solidi. There can be no doubt then that these are the sixtieths referred to in the Edict promulgated in A.D. 384 by Valentinian II and his colleagues, reserving to the Emperors and Consules Ordinarii the right of distribution of certain more precious sportulae on the occasion of public festivals. In this Edict not only is it forbidden to make gifts of gold coins, but also of any of silver larger than those habitually struck when a pound of silver is divided into sixty silver pieces.¹⁸

The very point of this enactment is that the double siliquae were a recognized part of the regular currency. And the particular value of these great hoards in the present connexion is that we here see these silver

¹⁸ *Cod. Theod.*, xv. 9. 1, *De Expensis Ludorum*: "Nec maiorem argenteum nummum fas sit expendere quam qui formari solet, cum argentea libra una in argenteos sexaginta dividitur." The larger silver pieces thus excluded are chiefly represented by a long series of "medallions" from the time of Constans and Constantius II to Honorius and Priscus Attalus (Gnecchi, *Medaglioni Romani*, i, pp. 61 seqq., and Pl. xxx-xxxvii), of which sixty specimens in various cabinets are known, and give an average weight of approximately 12.75 grammes. They answer, therefore, with sufficient exactness to three double siliquae or six siliquae.

"sixtieths" taking their place beside the siliquae as current coin.

It is to be noted that the average weight of the "medallions" from the North Mendip and Harptree finds is distinctly below the average presented by a mass of isolated finds. The heavier specimens would be naturally kept apart from the ordinary currency, and might indeed in some cases have been profitably melted. That this process of elimination was at work appears from a comparison of the weights given in Gneecchi's great work on Roman medallions, in which is included a considerable series of this class, taken from all sources from the time of Constantine to Honorius.¹⁹ An analysis of 305 coins of this series yields an average weight of 4.65 grammes. 202 of these pieces weigh between 4 and 5 grammes; 55 are over 5 grammes²⁰ (with an average weight of 5.28 grammes), and 48 under 4 (with an average weight of 3.72 grammes). They range from about 3.2 to 5.8 grammes. As in the case of the siliquae, it is the maximum weights that give the real clue to the theoretical standard. And in this case we obtain definite information from a remarkable piece struck at Aquileia on the occasion of the Decennalia of Constans,²¹ giving the numerical indication LX

¹⁹ Gneecchi, *Medaglioni Romani*, i, pp. 57 seqq.

²⁰ It is noteworthy that twenty of these referred in one way or another to the quinquennial festivals. It looks as if on these occasions fuller measure was allowed.

²¹ Cohen, viii, p. 429, No. 164 (Gneecchi, *op. cit.*, i, p. 64, Pl. xxxi. 2). *Rev.* VICTORIAE DD.NN. AVGG. Victory seated to l. and holding shield on her knees inscribed VOT X MVLT XV: in ex. LXAQ. The module 27 mm. is somewhat large, but is equalled by other "medallions" of the present series. A similar piece with AQ only in the exergue (Cohen, No. 163) weighs 5.38 grammes.

before the mint name in the exergue. The weight of this piece is 5.48 grammes—well within the limit of the heavier specimens of the present series. It approximates to the theoretic weight—about 5.6 grammes—of $\frac{1}{60}$ pound of silver, and must be unquestionably identified with one of the silver sixtieths referred to in Valentinian's Edict as used in public distributions.

The type which in the above case bears this special indication of value is well represented among the more or less contemporary "medallions" of several Emperors, though sometimes with the slight variation that Victory appears in a standing position with her foot on a globe.²² In all cases she is depicted writing quinquennial or decennial Vota on a shield. But the weights as a whole fall into the ordinary scale of the "medallion" series with an average of 4.226 grammes. The module varies in a similar way from 27 to 21 mm., the mean being about 23 mm.

It will be seen that these varieties cannot be separated from the other silver "medallions" of the present series. Any attempt to break it up into coins of separate

²² There are two varieties: 1. That represented by the piece of Constans, bearing LX in the exergue, bears the inscription VICTORIAE DD NN AVGG, and shows Victory seated writing VOT X MVLT XX (in other cases VOT X MVLT XV) on a shield. This variety is also included among the silver "medallions" of Magnentius from the Aquileia Mint (Gnecchi, No. 6), weight 4.40 to 3.94 grammes. 2. With legend, VICTORIA AVGVSTORVM. Victory standing with foot on globe, and writing on shield in the same way VOT V MVLT X and VOT X MVLT XV or VOT X MVLT XX (Valentinian I, Gnecchi, Nos. 14-19; Valens, do., 14-20; Gratian, do., No. 4). The weights, as a whole, vary from 5.380 to 3.700 grammes.

denominations is indeed doomed to failure. Within the limits given above, the same types are found constantly varying in weight. They show the same approximate module centring round 23 millimetres with a margin of two or three in either direction.

The evidence of contemporary documents, indications supplied by the coins themselves, and the harmony of the monetary system represented by the value of the *siliquae* and *solidi*, are only reconcilable with one conclusion. In these silver "medallions" we should recognize pieces having a theoretical value of $\frac{1}{80}$ pound silver—though in truth, like the *siliquae* themselves, of which they are the doubles, they were a coinage of account.

But if all these units, including the so-called "medallions", fitted thus into a simple and harmonious system, where, it may be asked, are we to look for the silver pieces known as "*miliarensia*" so frequently referred to from the close of the fourth century onwards? The name itself, which clearly has to do with reckonings in thousands or thousandths, seems to have been of old traditional usage.²³ It has been generally recognized as having been applied to a silver coin = $\frac{1}{1000}$ of a pound of gold. It is possible, as Seeck²⁴ suggests, that it was thus applied to the *denarius argenteus*, a thousand of which, according to Diocletian's abortive reform put forth in his *Edictum de pretiis rerum* of 301, were equal to a pound of gold. But the evidence of the attachment of the name to such

²³ Mommsen, *Monnaie Romaine*, ed. Blacas, iii, p. 82, n. 1, cites the story preserved by Lydus (*de Mens.*, iv. 2) that Scipio had invented this piece when short of gold in his war against Hannibal.

²⁴ "Die Münzpolitik Diocletians und seiner Nachfolger" (*Zeit. f. Num.*, xvii, pp. 36 seqq.).

silver pieces, which could only have had an ephemeral existence, is still to seek. Mommsen, on the other hand, has pointed out that the average weight of the silver pieces with which we are dealing—estimated by him at 4.55 grammes, a result closely approaching that given above—corresponded in fact with the silver value of $\frac{1}{1000}$ of a pound of gold. He concludes therefore that the name of "miliarensis" was for this reason attached to these coins,²⁵ and in this he has been more recently followed by M. Babelon.²⁶ This piece then was the equivalent of $\frac{1}{1000}$ of a silver pound, just as the Constantinian solidus was $\frac{1}{1000}$ of a gold pound. According to this reckoning the value of the miliarensis as compared with the solidus was as 1 to 13.88.

That this equivalence of the average weight of the silver "medallion" with the thousandth part of a pound of gold attached to it the name "miliarensis" is in itself probable enough. The miliarensis itself figures too largely in official documents of the time for it not to have answered to some well-known type of coin. The *scrinium a miliarensibus*, mentioned in the *Notitia*,²⁷ is only one of a series of indications that this name was applied to a familiar monetary class. It is true that in the Edict of Valentinian II and his colleagues, above cited, the name does not appear. But in a *Novella* of Justinian, which to a certain extent may be regarded as a reinforcement of

²⁵ *Op. cit.*, pp. 81, 82.

²⁶ *Traité des Monnaies Grecques et Romaines*, i, pp. 569, 570.

²⁷ *Notitia Dignitatum Orientis*, c. 12; *Occidentis*, c. 10. The office was in each case under the "Comes Sacrarum Largitionum", and was distinct from the "Scrinium Argenti" or "Ab Argento", and from the "Scrinium a Pecuniis" which dealt with bronze coinage. Cf. *Cod. Justinianus*, xii. 24. 7.

the earlier Edict,²⁸ this particular coin takes the place of the silver "sixtieths" previously named as being proper for distribution by those beneath the imperial dignity, this restriction here being extended to Consuls.²⁹

On the whole we need not hesitate to accept the view that the official name of "miliarensē" was applied to the larger silver pieces with which we are dealing. But great caution seems to be necessary in accepting some of the logical consequences that eminent numismatists have deduced from this, with regard to the current value of these "medallions". It is sufficient indeed to examine the contents of these large silver hoards, and to take the actual comparative weight of the coins of which they are composed, to see that the "miliarensē" (to adopt the name) was here fitted into a much simpler and more practical system. It passed, as we see, as a double siliqua, and 12—not 13 and a fraction, or even 14—went to a solidus. Nay, more, in some cases it actually bore the indication of value,—60 to a silver pound.

The short-lived system introduced by Diocletian (A.D. 301–3) had at least a practical basis. As a matter of fact the relation of the standard silver and gold pieces and of the pound of gold as proposed by

²⁸ By the provisions of *Cod. Theod.*, xv. 9. 1, however, Consules Ordinarii as well as the Emperors were allowed to make distributions in gold. By Justinian's *Novella* only silver distributions are allowed to Consuls.

²⁹ Just., *Novellae*, cv, *De Consulibus*, c. 2. 1, in the Latin text: "Non, tamen, aurum spargere sinimus, non minoris alienius, non maioris omnino, non medii characteris aut ponderis, sed argentum sicuti praediximus solum. . . . Hoc sinimus in eos spargere in his quae vocantur miliarisia," &c. (*ἐν τοῖς καλουμένοις μιλιάρησις*).

him greatly resembled that which at present obtains between French francs, Napoleons, and 1,000 franc notes. 20 "argentei" went to a solidus, and 50 solidi or 1,000 argentei to a pound of gold. The solidus having been finally established by Constantine (about A.D. 309) at the rate of 72 to a pound, a new harmonization with the silver system was naturally entailed. The siliquae or *κεράτια* were theoretically issued on a footing of $\frac{1}{24}$ to the solidus. These siliquae, as we shall see,³⁰ had become monetary units at least as early as A.D. 323—the approximate date of the issue of the larger silver denomination with which we are dealing. But to strike, side by side with these "twenty-fourths", a new silver piece $\frac{1}{1000}$ of a pound of gold in value, and of which 13.88 would be the equivalent of a solidus, could have had no practical utility whatever. Even assuming that this piece was tariffed at 14 to a solidus, it would represent a cross system of reckoning wholly beyond the popular comprehension. It would not even in this case hit the mark. Since 5 solidi now went to the pound of silver this would make the rate 70 miliarensia to a solidus instead of 72, which is the centre-point of the whole system.

As a matter of fact, though the average weight of these coins from the middle of the fourth century onwards was, as we have seen, compatible with a reckoning of 1,000 to a pound of gold, this does not seem to have been the case with the earlier class as introduced by Constantine from about A.D. 324.³¹ An examination of the series of Constantinian pieces of this

³⁰ See below, p. 464.

³¹ See J. Maurice, *Numismatique Constantinienne*, ii, pp. 414-16. The evidence of date is best supplied by the Sirmium mint.

class given in Gneecchi's work²² shows that the average weight of 19 was exactly 5 grammes, and there can be no doubt that a selection of the better preserved pieces of this class would give an appreciably higher average. 5 grammes itself is about half a gramme heavier than the proper full weight of the silver value of $\text{TO}^{\text{L}}_{\text{OO}}$ of a gold pound, which, as we have seen, is 4.55 grammes. Such a result is fatal to the conclusion that these pieces were originally struck as "thousandths" of the gold pound, while it strongly favours the view that they were intended for sixtieths of the silver pound. It is absurd to suppose that the new coins were struck at an actual loss to the Treasury of 10 per cent.

We must therefore infer that the application of the traditional name of "miliarensis" to these pieces was a later accretion, and that this could hardly have taken place earlier than the latter half of the fourth century, when the average weight of these pieces had reached a level compatible with such an equation.

The conclusion to which we are led by these considerations may be stated as follows. While there seems to be no sufficient reason to dispute the fact that the larger silver pieces answer to the official miliarensia of the close of the fourth century and later, they were yet originally introduced as sixtieths of the silver pound, or double siliquae. Both standpoints with regard to them are in fact reconcilable. Regarded as

²² *Medaglioni Romani*, i, pp. 57-9. I have omitted defective or exceptionally worn and fractured pieces (Nos. 1, 16), while something should be added to the fractured piece (No. 26), here given as 5.800. Seven out of eighteen of these coins weighed 5 grammes or over; one over 6 grammes, and to this must certainly be added the last mentioned, the original weight of which could not have been less than 6.500 grammes.

monetary units it was necessary that they should bear a simple relation to the gold and silver coins with which they were associated in the currency. But with the growing tendency, from about the middle of the fourth century onwards,³³ to reckon larger sums by weight, it was an almost equal convenience to have a coin the value of which averaged in practice $\frac{1}{1000}$ of a gold pound.³⁴

§ 4. THE SILIQUAE.

The early history of the miliarensia is very closely bound up with that of the smaller companion pieces,

³³ See the provisions of the Theodosian Code, *passim*.

³⁴ As a logical consequence of this may be explained the fact that in the *Nomic Glosses* contemporary with the *Novellae* of Justinian the solidus was equated with 14 miliarensia (Hultsch, *Metrologicorum Scriptorum Reliquiae*, i, p. 307). The two statements, Μιλιαρίσιον, τὸ χιλιοστόν τῆς τοῦ χρυσοῦ λίτρας and τὸ εἰμίσημα (χρυσοῦς) λαγχάνει μιλιαρία 1Δ, are there complementary to one another.

An unknown lexicographer (Hultsch, *op. cit.*, i, pp. 308 seqq.) gives two alternative estimates of the miliarensis, one equating it with $1\frac{1}{4}$ siliquae, the other giving its contemporary value (πρὸς τὸ νῦν κρατοῦν) as 2 siliquae. On the other hand, we have the earlier statement of Saint Epiphanius in his work, *De Ponderibus et Mensuris* (Hultsch, *op. cit.*, i, 266-9), written at Alexandria about 392, in which the great *folles* of 125 miliarensia is equated with two silver pounds (ἀργυροῖς) or 250 siliquae (here called δηνάρια). The miliarensis, therefore, as Seeck points out (*Zeitschr. f. Numismatik*, xvii, pp. 68, 69), was at the end of the fourth century equivalent to two siliquae. In one respect, however, this calculation somewhat differs from that which (following the provision of the Theodosian Code) I have above adopted, inasmuch as 125 siliquae are here reckoned to a silver pound instead of 120, which would make the legal weight of the miliarensis about $\frac{1}{3}$ of a pound silver instead of $\frac{1}{40}$. This is awkward, and it is safer to follow the provision of Arcadius and Honorius as stated in *Cod. Theod.*, xiii, 2, 1, by which 5 solidi (of 24 siliquae or keratia) or 120 siliquae went to the silver pound. If 2 siliquae go to the miliarensis this gives 12 of the latter to the solidus and 60 to the pound, a more rational arrangement.

the siliquae. Both classes seem to have sprung into existence about the same time. It is interesting to note, moreover, that the first mention of siliquae also occurs in a "sportulary" connexion. An inscription found at Feltre (Feltria), in Venetia, in 1907, shows that the siliqua was already used for public distributions as early at least as A.D. 323, the date of this lapidary record.³⁵ The inscription gives the terms of a legacy of 500,000 denarii, the interest accruing from which was to be distributed as sportulae to the municipal authorities and the "Collegia Fabrum et Centonariorum" at the feasts held in memory of the benefactor, on the anniversary of his birthday and at the time of the Rosalia. Aurei, siliquae, and nummi are here named as the coins to be used in these distributions.

The copious issue of siliquae as ordinary current coin does not seem to have taken place earlier than about 340, when Constantius II would have celebrated his Quinquennalia, referred to on some of these pieces. But we have other evidence besides the lately discovered inscription that siliquae of very full weight,

³⁵ "Severo et Rufino Consulibus." The inscription was published by Gherardini (*Notizie degli Scavi*, 1907, pp. 431-7) and by Lorenzina Cesano (*Rendiconti della r. Accad. dei Lincei*, 1908, pp. 237-56), who called attention to the first mention of the siliqua. The whole subject has been rediscussed by W. Kubitschek (*Numismatische Zeitschr.*, xlii, pp. 52 seqq.). He read the last part of the inscription IIII VIR(IS) ET SEX PRINC(IPALIBVS) ET OFF(ICIO) PVB(LICO) SPOR(TVLARVM) NO(MINE) AVREOS DEN(OS) ET SIL(IQVAS) SING(VLAS) NEICNON ET PER ROS(AM) AT MEMOR(IAM) EIVS REFRIGERAR(I) DEVEB(VNT) N(VMMIS) CCCLXII.

and analogous in this respect to the early "sixtieths", were struck before the death of Constantine III. M. Maurice had in fact already recognized coins of this denomination in certain silver pieces issued by Constantine in 324.³⁶ It is clear that during the preceding decennium the Roman silver coinage had almost entirely ceased.³⁷

The following is an analysis of the weights of siliquae from Constantius II to Honorius belonging to the present hoard:

WEIGHT OF SILIQUAE.

		Average Maximum Weight. Weight. Grammes. Grammes.	
Constantius II .	20 fairly preserved specimens (slightly worn)	1.990	2.43
Julian . . .	100 fairly preserved specimens (slightly worn)	1.937	2.6
Valentinian I .	20 good specimens .	1.92	2.21
Valens . . .	100 good specimens .	1.955	2.36
Gratian . . .	20 good specimens .	1.99	2.30
Valentinian II .	20 good specimens .	1.916	2.30
Theodosius I .	20 good specimens .	1.88	2.40
Magnus Maximus.	50 good specimens .	1.90	2.21
Arcadius . . .	5 good specimens .	1.90	2.10
Honorius . . .	5 good specimens .	1.30	1.60

³⁶ J. Maurice, *Numismatique Constantinienne*, I, xlv, xlv; II, p. 415 (*Rivista Italiana di Numismatica*, 1904, p. 85). The piece here attributed to Sirmium has no exergual indication. *Obv.* IMP CONSTANTINVS AVG Laureate head to right. *Rev.* VIRTVS AVG ET CAESS Trophy with shield and spears on either side. Weight, 2.65 grammes; 17 mm. A unique silver piece of Constans in my collection may also be regarded as a siliqua of somewhat full weight. *Obv.* FL IVL CONSTANS P AVG Diademed bust r. with paludamentum and cuirass. *Rev.* CONSTANS AVG Three palm-branches, star over the central one; in ex, SISQ. Weight, 2.84 grammes; 17 mm.

³⁷ Cf. Maurice, *op. cit.*, I, xlv.

It will be seen from this Table that the average weight of the siliqua from the time of Constantius II to Arcadius here works out at about 1.93 grammes,²⁸ while the maximum weight varies from 2.10 to 2.60 grammes. But the coinage of Honorius as exemplified by well-preserved specimens from this hoard shows a distinct falling off—the average being only 1.30 grammes and the maximum 1.60 grammes.

It is further noteworthy that the earliest series of coins belonging to Constantius II and Julian, though slightly worn in comparison with the others, are quite on a level with them in weight. Indeed, it looks as if a set of finely preserved siliquae of Constantius II would yield an average weight of quite 2 grammes.

The results regarding the minimum of weight in the different series are not of the same value as those that give the average or the maximum.²⁹ With coins of abnormally low weight the wear or oxidization of the surface, fractures, and insidious forms of clipping and sweating, generally play a determining part, so that

²⁸ Thus closely approaching the average of the Gravelly Wood specimens, 1.909 grammes (Hill, *Num. Chron.*, 1906, p. 342). The siliquae of the Danubian Hoard, described by Missong ("Fund römischer Siliquen aus den Jahren 360–367 n. Chr. Geb.," in *Wiener Numismatische Monatshefte*, 1868), had an average weight of 1.838 grammes.

²⁹ Omitting some obviously defective coins the minimum results in the case of various samples of the present hoard were as follows: Constantius II, 20 coins weighed; 2 under 1.8 grm., minimum 1.6 grm. Julian, 100 weighed; 8 under 1.8 grm., min. 1.6 grm. Valentinian I, 29 weighed; 2 under 1.8 grm., one 1.6 grm. Valens, 100 weighed; 13 under 1.8 grm., min. 1.55 grm. Gratian, 20 weighed; 3 under 1.8 grm., min. 1.5 grm. Valentinian II, 20 weighed; 1 under 1.8 grm., min. 1.75 grm. Mag. Maximus, 50 weighed; 8 under 1.8 grm., min. 1.45 grm. Theodosius I, 20 weighed; 2 under 1.8 grm., min. 1.05 grm. Arcadius, 5 weighed; 1 under 1.8 grm., min. 1.11 grm.

the weight itself has little relation to the original intention of the moneyer. From a number of tests made in the case of the present hoard it appears that no more than about 10 per cent. of the siliquae were under 1.8 grammes (c. 28 gr.) in weight. On the other hand, out of two hundred well-preserved coins from this find of various Emperors twenty, or again exactly 10 per cent., weighed over 2.2 grammes. It thus appears that, of the siliquae in good condition from Constantius to Arcadius inclusive, some 80 per cent. ranged in weight between 1.8 and 2.2 grammes. We shall not be far wrong in saying that the original average weight attained by the siliquae of this period was approximately 2 grammes.

This of course is below the theoretical value of the siliqua. For we know that 24 siliquae (or *κεράτια*) went to the gold solidus, and that the legal value of a pound of silver was 5 solidi;⁴⁰ 120 siliquae therefore went to the pound of silver or according to the standard Roman weight 327.5 grammes, so that by this reckoning the siliqua should have weighed about 2.72 grammes. It is true that the silver ingots, evidently intended to represent a pound weight, issued officially by the Treves mint weighed, as we know from the examples contained in the Dierstorf find, only about 310 grammes. But even supposing that provincial standards of this class were kept in view, the difference between the net and the theoretical average weight of the siliqua is too great to be explained by any such hypothesis.

We must infer that the siliqua was largely a money

⁴⁰ *Cod. Theod.*, xiii. 2. 1.

of account, and that its coinage was probably a considerable source of profit to the Imperial Treasury.

It is clear, however, that in dealing with the double *siliquae* or *miliarensia*, often called "medallions", represented in this and similar hoards we are on somewhat different ground. That these were current coins indeed is generally admitted, but it seems none the less clear that they represent issues of an honorary character and were used for official distribution on certain festal occasions.

§ 5. THE HALF-SILICUAE OR "MINUTULI".

In addition to the *siliquae* and their doubles, the North Mendip hoard produced a series of coins of lesser weight and module. It is no doubt difficult at times to distinguish these "conventional *quinarii*" from *siliquae* of exceptionally small weight and module. As Mr. Hill pointed out in the case of the Treves coins from the Grovely Wood hoard, the catena of weights in the case of undoubted *siliquae* stretches with few missing links from about 2.6 grammes (40 to 41 gr.) to 1.1 grammes (17 to 18 gr.),⁴¹ and he cites the fact that in the Danubian Hoard described by Missong the weight ranged from 2.27 to 1.38 grammes so gradually as to defy division into two groups. The same is true in the case of the ordinary *siliqua* types in the present hoard. But it must be remembered that the exceptionally high and exceptionally low weights in all these series represent a vanishing minority. They are like the bad shots of a fairly practised marksman becoming fewer and fewer in the rings of the target as they recede from the bull's-eye.

⁴¹ *Num. Chron.*, 1906, pp. 343, 344.

The real amount aimed at is shown by the average weight, which in the case of a large number of siliquae weighed is seen to hover about 2 grammes.

But apart from the coins of ordinary siliqua type of abnormally low weight there occurred in the present hoard a small series of silver pieces, several of them of types distinct from those of the siliquae, and all of these were below a weight limit to which the latter only exceptionally descended.

The principal reverse types of these diminutive silver pieces are as follows:

A. **VICTORIA AVGGG** Victory marching left and holding palm and wreath.

1. Gratian. (*Obv.*—**DN GRATIANVS PF AVG**: draped bust to r.) In ex. of reverse **R B** (Rome).

No. 54 above.⁴² Wt. 1.14 grm. Mod. 15.5 mm.
Pl. XX, Fig. 8.

2. Valentinian II. (*Obv.*—**DN VALENTINIANVS PF AVG**: draped youthful bust r.) In ex. of reverse **R P** (Rome).

No. 65 above.⁴³ Wt. 0.875 grm. Mod. 14 mm.
Pl. XX, Fig. 10.

3. Do. Similar types and inscriptions. In ex. of reverse **TRPS** (Treves).

B. M.; apparently from the North Mendip hoard.
Wt. 0.842 grm. Mod. 16 mm.

4. Theodosius I. (*Obv.*—**DN THEODOSIVS PF AVG**: as preceding.) In ex. of reverse **MD** (Milan).

B. M. Wt. 1.150 grm. Mod. 13 mm.

5. Honorius. (*Obv.*—**DN HONORIVS PF AVG**: draped and cuirassed bust r.) In ex. of reverse **RV** (Ravenna). In my collection; perhaps N. Mendip hoard.

Wt. 1.05 grm. Mod. 13 mm. Pl. XX, Fig. 14.

⁴² Not in Cohen.

⁴³ Cohen, No. 422. No weight given, but described as "quinarius".

6. Do. (*Obv.*—Similar type and legend.) In ex. of reverse apparently **RM** (Rome).⁴⁴

B. M. Collection. Wt. 1.01 grm. Mod. 14 mm.

7. Do. (*Obv.*—Same type and legend.) In ex. of reverse **MD** (Milan).

Wt. 1.057 grm. Mod. 1.45 mm.

B. PERPETVETAS Phoenix with rayed head standing l. on globe.

1. Gratian. (*Obv.*—**DN GRATIANVS PF AVG**: draped bust to r.) In ex. of reverse **TRPS**⁴⁵ (Treves).

No. 52 above. Wt. 1.3 grm. Mod. 16 mm.

2. Theodosius I. (*Obv.*—**DN THEODOSIVS PF AVG**: as preceding.) In ex. **TRPS**⁴⁶

No. 76 above. Wt. 1.35 grm. Mod. 16 mm. Pl. **XX**, Fig. 11.

C. VIRTVS ROMANORVM Rome seated facing with head turned l. holding globe and spear.

1. Gratian. (*Obv.*—**DN GRATIANVS PF AVG**: draped bust r.) In ex. of reverse **TRPS**.

No. 55 above. Wt. 1.25 grm. Mod. 15 mm. Pl. **XX**, Fig. 7.

2. Magnus Maximus. (*Obv.*—**DN MAG MAXIMVS AVG**: similar type.) In ex. of reverse **TRPS** (Treves).

See No. 83 above. Wt. 1.4 grm. Mod. 14.5 mm. Pl. **XX**, Fig. 9.

⁴⁴ Under Honorius, No. 38, "très petit module", Cohen gives this exergual inscription as well as **RV** and **MD**.

⁴⁵ A silver piece of the same type of about the same module (also **TRPS**) is given by Cohen, Gratian, No. 27, but without indication of weight (M. Rollin).

⁴⁶ Cohen (Theodosius, No. 26) reproduces a similar piece of about the same module (M. Charles Robert, weight not given). Another similar piece, also from the Treves mint, is in the British Museum, but it shows a weight which comes within the lower limits of the siliqua scale, viz. 1.781 grm. Its module is 16.5 mm.

3. Victor. (*Obv.*—DN FL VICTOR PF AVG: same type.) In ex. of reverse **TRPS** (Treves).

See No. 88 above. Wt. 1.54 grm. Mod. 14.5 mm.
Pl. XX, Fig. 12.

- D. **VIRTVS ROMANORVM** Rome seated to l. holding Victory and spear.

1. Honorius. (*Obv.*—DN HONORIVS PF AVG: as preceding.) In ex. of reverse **MDPS** (Milan).

In my Collection. Cf. No. 92 above. Wt. 0.75 grm.
Mod. 13 mm.⁴⁷ Pl. XX, Fig. 13.

- E. **VOT X MVLT X** in wreath.

1. Honorius. (*Obv.*—Draped bust to r.) In ex. of reverse **MDPS** (Milan).

B. M.; Coleraine Hoard. Perhaps very slightly clipped. Wt. 1.068 grm. Mod. 15 mm.

We have here then a class of small silver pieces which both in the range of their weight and module come well below the siliqua standard. Their average weight is 1.126 grammes as compared with about 2 grammes. Their weight ranges from 0.750 to 1.540 as compared with about 1.6 to 2.4 grammes. Their average module is about 14.5 mm. with a range of from 13 to 16. That of the siliqua, according to my own researches, averages 17.5 mm., and its range is from 16 to 19.5.

It will be seen that the coins of this class might easily pass for $\frac{1}{2}$ siliquae of somewhat full weight, and as such it may be convenient to regard them. So far

⁴⁷ The reverse of this coin is from a die of the ordinary siliqua module, so that there was no room for the outer circumference of the inscription on the flan. Coins of Arcadius (wt. 1.05 grm.) and of Honorius (wt. 0.98 grm.), both of the **VIRTVS ROMANORVM** type and from the Milan mint, and 16 mm. in diam., may perhaps be regarded as examples of debased siliquae.

as the above evidence goes this coinage was confined to the mints of Rome, Treves, and, later, Ravenna and Milan.

Of the above types, A, reading **VICTORIA AVGGG**, though it occurs on the small bronze coins of Gratian, is not known on his ordinary siliqua series, but it is not unfrequent on that of Valentinian II. It is not found on any siliqua of Theodosius I⁴² from the present hoard. The phoenix type (B) reading **PERPETVETAS** is of great rarity, and seems to be specially associated with this diminutive class, though one or two specimens of ordinary weight and module exist.⁴³ The classes (C and D) reading **VIRTVS ROMANORVM** answer to a regular siliqua type.

To the series given above must be added two additional types of small silver coins (F and G) of the same approximate weight, but forming a distinct and interesting group. To the specimens from the North Mendip hoard I have been able to add three from the British Museum.

F. *Obv.*—Draped helmeted bust of Roma I., within circle of linked pellets. The bust in some specimens is of inferior execution.

⁴² Cohen mentions a single specimen, reading **AQPS** (Theodosius, No. 40) on the authority of D'Eunery.

⁴³ A coin of Valentinian II of this class is mentioned by Banduri (Tom. ii, p. 492) as in the Farnese Collection "nummus rarissimus imo singularis est et desiderator in Mediobarbo". Another was published by H. L. Tovey in *Num. Chron.*, xi, 1849, pp. 176-9 (cf. Cohen, No. 25). He does not give its weight or module, but speaks of it as "of the common diminutive size of the period". He asserts, however, that the reverse was from the same die as a "coin of Theodosius in the British Museum". This specimen comes within the ordinary siliqua limits both in weight and module.

Rev.—**X** within laurel-wreath. In ex. **TR** (Treves).

Two specimens. No. 98 above. Wt. 0.9 and 1.06 grm. Mod. 14 mm. Wt. 1.06 grm. Mod. 15 mm. Pl. **XX**, Figs. 15, 16.

B.M. Wt. 1.08 grm. Mod. 15 mm. Wt. 0.94 grm. Mod. 14 mm.

G. Obr.—Similar.

Rev.—**XV** in wreath. In ex. **TR** (Treves).

No. 99 above. Wt. 0.63 grm. (About a third of the coin is broken off and the original weight must have been about 1 gramme.) Mod. 13 mm.

B.M. Wt. 0.78 grm. Mod. 15 mm. Pl. **XX**, Fig. 17.

It will be seen that the average weight of the coins of types F and G is 0.96 gramme, with a maximum weight of 1.08 grammes and a minimum of 0.78. The module varies from 13 to 15.



FIG. 1. Hybrid half-siliqua, found at Upware, Cambs.

It is clear that the above pieces all represent the same denomination as the others, and their average weight answers very accurately to the half of the siliqua of ordinary circulation. They are all from the Treves mint, and a noteworthy point about them is that the obverse type shows the head of Roma in place of that of a reigning Emperor. This is a rare deviation from the ordinary rule in the case of the later silver coinage, but it is shared by a parallel group of small silver pieces to be referred to below.

A curious hybrid type, belonging to Professor Hughes of Cambridge (Fig. 1), may be taken to show that similar small silver pieces were also struck by the Aquileian mint. The obverse of this, which is dis-

tinently barbarous, seems to present a blundered version of the name either of Theodosius or Honorius. The reverse, however, with **XV** in a wreath and **AQ** below, is clear enough. Professor McKenny Hughes, to whose kind permission the publication of this piece is due, kindly adds the information that it was found on the Upware ridge opposite Stretham, Cambs., together with a silver piece (siliqua) of Julian II from the Treves mint reading **VOTIS V MVLTVS X**. The coins lay with the remains of two skeletons, and each had served as one of Charon's obols.

On their reverse these coins show **X** and **XV** respectively within the usual laurel-wreath that elsewhere contains the enumeration of the Vota. There can be no reasonable doubt that the figures in the present series have a similar signification, of which, indeed, no one familiar with the contemporary coinage would be for a moment in doubt. What remains uncertain is whether we should regard these all as decennial pieces, and see in the respective figures a reference to the solution of the Decennalia Vota and the susception of the Quindecennalia, as in the common legend **VOTIS X MVLTVS XV**, or whether we should regard them as representing two successive issues, one in honour of the Decennalia, the other of the Quindecennalia. The latter appears to be on the whole the more reasonable assumption.

A figure of type F is given by Cohen in his section dealing with the Constantinian series reading **VRBS ROMA**.⁶⁰ It is of similar small module, but the weight, as usual, is not recorded. M. Feuarent, how-

⁶⁰ *Descr. des Monn. Romaines*, ed. 2, vii, p. 329, No. 11.

ever, makes the just observation that the coin is later than Constantine's time, and that it cannot have been earlier than the age of Valentinian II.

In some respects, however, the coins of types F and G present a close parallel to a very enigmatic group of small silver pieces of similar module. Some of these bear on their obverse a helmeted head of Roma, while on the reverse appears K, P, or R in a beaded circle, and they have been variously regarded as later than the Constantinian period, as belonging to the time of Theodosius or to that of Justinian.

The letters in the field on the reverse have been interpreted as referring K to Constantinople and R or P to Rome. The weight of the specimens of this series in the British Museum varies from about 1.425 grammes (22 grains) to 0.650 (10.3 grains).⁵¹ Some are quite neatly executed, but the bust of Roma on the bulk of them is extremely barbarous, at times recalling the "Invicta Roma" of the Ostrogothic bronze coins. In certain cases the reverse with P or K is coupled with an imperial head on the obverse. One such has been attributed to Fausta,⁵² but her coiffure bears a greater resemblance to that of Helena,⁵³ while the youthful bust of Constantine II or one of his colleagues has been recognized in another.⁵⁴ Another shows a bearded bust.⁵⁵ It seems probable that we have here to deal

⁵¹ W. Wroth, *Imperial Byzantine Coins in the British Museum* i, p. 71. The suggestion is there made that these pieces may be *tesserae* rather than coins.

⁵² By Feuardent, in Cohen, *Monnaies Romaines*, ed. 2, vii, p. 337.

⁵³ Compare Cohen, vii, p. 95, No. 4.

⁵⁴ Cohen, vii (in 1st ed. assigned to Fausta). Feuardent would, however, refer it to Arcadius or Honorius (*loc. cit.*, note 1).

⁵⁵ Wroth, *loc. cit.*, rev. K (*Rev. Num. Belge*, 1905, p. 160).

with occasional pieces issued at intervals during a considerable period of years, but the whole series is deserving of special investigation.

The natural question suggests itself—Have we in the series of small silver issues enumerated above under types A–G examples of the “argentei minutuli” which were current about the end of the fourth century? The word itself implies a distinction between the ordinary current silver coin, in which we must recognize the *siliquae*, and a more diminutive class.

Our knowledge of the term “minutuli” is indeed due to that strange farrago known as the *Scriptores Historiae Augustae*,⁵⁶ so largely pieced together, as recent criticism has shown, from forged documents, and replete with anachronisms. The work itself belongs to the close of the fourth century, and the numismatic details foisted into its materials have now been conclusively demonstrated to be altogether foreign to the monetary conditions of the third century, to which they are applied. On the other hand, every element as far as it can be traced illustrates the system and nomenclature of the Imperial coinage as it existed in the age of Honorius.⁵⁷ In this way there is a certain value in the statement of Lampridius, in his *Life of Severus Alexander*,⁵⁸ that the price of a pound of pork or veal

⁵⁶ Fl. Vopisci, *Vita Aureliani*, 9. 7 and 12. 1. (The application here of the term *Philippeos* to silver coins itself sufficiently marks the work of an ignorant forger.) Ael. Lampridii *Vita Sev. Alexander*, 22. 8.

⁵⁷ I need only refer to the convincing and exhaustive essay of K. Menadier, “Die Münzen und das Münzwesen bei den *Scriptores Historiae Augustae*,” *Zeitschr. f. Numismatik*, 1913, pp. 1 seqq.

⁵⁸ c. 22. 8 “Tantumque intra biennium vel prope annum porcinae carnis fuit et bubulae ut cum fuisset octo minutulis libra ad duos unumque utriusque carnis libra redigeretur”. The

was reduced in little over a year from eight to two "minutuli" or even a single "minutulus". For we know that in Diocletian's edict, *De pretiis rerum*, the price of a pound of pork was fixed at 12 denarii and of veal at 8. About 28 of Diocletian's "denarii" (50,000 to a gold pound) would have been contained in the later siliqua. If we roughly take the price of a pound of meat at the doubtless very low rate of 10 denarii (the mean of 12 and 8) this would make its value $\frac{12}{10}$ or somewhat over a third of a siliqua. This tends to show that the "minutulus" must have been of lesser denomination than the siliqua, and for this reason Seeck⁵⁹ identified it with the small silver pieces current under Honorius.

That from Honorius's time onwards halves or lesser divisions of the siliqua were freely issued is generally recognized by numismatists.⁶⁰ The importance of the

emendation *octo minutulis* for the unintelligible *octominutulis* is due to Mommsen.

⁵⁹ *Rhein. Museum*, 49, p. 221. But in view of the existence of half-siliquae as early as Gratian, this identification does not in itself show that the passages in the *Scriptores* are necessarily later than A. D. 395.

⁶⁰ Seeck, "Die Münzpolitik Diocletians und seiner Nachfolger," *Z. f. Numismatik*, xvii (1890), p. 66 "Doch beginnt schon Honorius ein neues Nominale zu schlagen, das nach seinem sehr geringen Umfange und seinem Gewicht von 1·13-0·83 etwa das Halbstück der Siliqua bedeuten kann". He thinks, however, it may answer to the "decargyrus" mentioned in *Cod. Theod.*, ix. 23. 2, which would have contained 10 denarii, and was about $= \frac{2}{3}$ siliqua. Babelon, *Traité de Numismatique*, i, pp. 577, 578, speaks of half-siliquae of Constantius II and Julian, but he assigns to the siliqua a higher mean weight than results from the mass of the evidence ("dans les médaillers les siliques se répartissent, sauf exceptions, entre 2 gr. 30 et 2 gr. 15, aussi bien pour le règne de Julien que pour celui de Constance II. Sous Gratien les pièces que j'ai pesées vont de 2 gr. 50 à 2 gr. 08"). There was, however, as pointed out above, such a constant variation in the siliqua weight above and

small silver pieces contained in the present hoard and of the comparisons to which they lead lies in the evidence thus afforded that the half-siliqua issues go back to the time of Gratian. They were doubtless, however, of a limited kind, and may have been of a "sportulary" class, recalling our "Maundy money". They were useful, it seems, for Charon's toll. From the beginning of the fifth century, however, these halves or other fractions of the siliqua became the ordinary silver currency, though here again we must remember that, as in the case of Honorius's silver issues, a certain proportion of these coins were intended for siliquae, though much debased in weight.

§ 6. INDICATIONS OF A REVIVAL OF THE LONDON MINT BY VALENTINIAN I.

The Roman mint at London was first opened by Carausius and maintained by Allectus, both Emperors using it for gold as well as inferior metal. By Diocletian and his colleagues⁶¹ it was confined to the issue of bronze pieces, as well as by Constantine and his family.⁶² In A.D. 326 the mint of London, like that of many other cities, was closed by Constantine. It was not allowed, moreover, like many other mints, to enjoy a period of renewed activity from 333 to 337.

below an average of about 2 grm., that in identifying fractions of a siliqua the only safe rule seems to be to make it a condition that an exceptionally low weight should be accompanied by an exceptionally small module, so that the bulk of these pieces can be recognized by eye.

⁶¹ On the London coins of Diocletian without mint-mark see De Salis, "Roman Coins struck in Britain," *Num. Chron.*, 1867, p. 58.

⁶² See on this J. Maurice, *Numismatique Constantinienne*, ii, pp. 1 seqq.

It was long supposed that the Roman mint of London did not survive the Constantinian age. In 1867, however, De Salis called attention to some rare gold solidi of Magnus Maximus—struck that is about A.D. 383—with the legend **VICTORIA AVGG**, and bearing the mint-mark **AVCOB**, hitherto ascribed to Treves, and pointed out that Londinium Augusta had a better claim.⁶³ This view received further support in a paper by my father in the same volume of the *Numismatic Chronicle*,⁶⁴ who there described the



FIG. 2. Silver gilt solidus of Theodosius with mint-mark of Augusta. (B. M.)

two siliquae of Magnus Maximus, referred to in the preceding paper, with the exergual legends **AVGPS** and **AVG**.

In his last communication to this Society, in a paper read by him on April 23, 1908,⁶⁵ my father returned to the same subject, and published a fresh specimen of a solidus of Magnus Maximus with the exergual inscription **AVC. OB** (Pl. XX, Fig. 5).

There also exists in the British Museum a solidus of Theodosius I of a similar type (Fig. 2), and presenting

⁶³ *Num. Chron.*, 1867, pp. 61, 62. Cf. Madden, *Num. Chron.*, 1861, p. 122, note, for the name "Augusta" as applied to London.

⁶⁴ *Num. Chron.*, 1867, p. 329, "Coins of Magnus Maximus struck at London."

⁶⁵ *Num. Chron.*, 1908, pp. 99 seqq., and Pl. x. 15. Cf., too, L. Forrer, "Un Sou de Maxime frappé à Londres," *Bull. Numismatique*.

the same exergual inscription **AVCOB**.⁶⁶ It is really of silver gilt, but was certainly taken from a gold original, and must therefore be regarded as representing an Imperial issue.⁶⁷ As, however, in spite of the murder of Gratian, Theodosius found it politic for a while to recognize the usurper as a colleague, the solidus in question may have been struck in Maximus's lifetime.

That Magnus Maximus, who made Britain the starting-point for his Continental enterprise, should have struck coins at the London mint was natural enough. But the great restoration and reorganization of Roman Britain at the hand of Valentinian's general, Theodosius, had taken place sixteen years earlier, and there exist, as we shall see, some curious pieces of numismatic evidence which bring the revival of the mint at Londinium Augusta into connexion with that event.

Already in 360 Julian, then in his winter quarters at Paris, had been seriously disturbed by the news of a combined attack of Picts and Scots on Britain, and had sent his *Magister Armorum* Lupicinus to "Lundinium", which here appears under its old name,⁶⁸ to take remedial measures. But matters went from bad to worse, and it seems probable that the Saxons then ravaging the Gaulish *limites* had also taken a hand. The *Dux Britanniarum* Fullofaudes was successfully ambushed by the barbarians, and "Comes Maritimi tractus" Nectaridus, whose sphere of activity would

⁶⁶ Published by De Salis, *Num. Chron.*, 1867, p. 62, and Pl. iv. 16.

⁶⁷ De Salis, *loc. cit.*, was inclined to regard the piece as barbarous, I venture to think on insufficient grounds. It weighs 50.7 gr.

⁶⁸ Ammianus Marcellinus, lib. xx, c. 1.

point to the Channel and later "*Littus Saxonicum*", was slain.

This news was brought to Valentinian in 361, who was then leaving Amiens, where he had just conferred on his young son Gratianus the dignity of Augustus. He at once dispatched his great general Theodosius, "the father of a line of Emperors," to liberate Britain. The first task of the new "*Dux*" on his march from Richborough to London was to clear the Kentish tract through which he passed from roving bands of barbarians, a fact which clearly illustrates the extent to which Britain had been overrun. He then proceeded to the relief of London, which had been reduced to great extremities, and made his triumphal entry into the city in A.D. 368.⁶⁹

The passage of Ammianus Marcellinus⁷⁰ describing the entry of Theodosius into London has been more than once cited in connexion with the changed name of its mint as seen on the coins of Magnus Maximus. It is there described as "*Vetus oppidum quod Augustam posteritas adpellavit*". A little later, on the departure of Theodosius from the city, Ammianus reiterates his annotation on the name—"Augusta . . . quam veteres adpellavere Lundinium".⁷¹ Valentinian's general, we are told, recovered the Roman province which had fallen under the hostile yoke, renaming it Valentia in honour apparently of his brother Valens.⁷² After restoring the cities and provinces of Britain, and

⁶⁹ Ammianus Marcellinus, lib. xvii, c. 8 "*Mersam difficultatibus suis antehac civitatem, sed subito, quam salus sperari recreantem, in ovantis speciem laetissimus introit*".

⁷⁰ *Loc. cit.*

⁷¹ Lib. xxviii. 3.

⁷² Bury, note to Gibbon, vol. iii (1897), p. 45, note 122.

regarrissoning the *Castra* and *limites*, he made a triumphant return South in 369, and recrossed the Channel on his way to rejoin his master at Treves.

That one episode in this great work of restoration was the reopening of the mint at London may be inferred from a very interesting group of silver coins struck by Valentinian and his colleagues to which attention is now for the first time directed.

The coin which first arrested my own attention was a silver piece of Valentinian the Elder of the double *siliqua* or *miliarense* class [Pl. XX, Fig. 1]. It was formerly in the collection of Señor Vidal Quadras y Ramon at Barcelona,⁷⁴ and was acquired by me at his sale in 1913. This collection contained a numerous series of these larger silver coins, apparently derived from a hoard. The large hoards of Roman silver coins dating from the last half of the fourth century have, as is well known, been almost exclusively confined to Britain, and in most cases to the western part of our island, especially Somerset,⁷⁵ but I have not been able to trace the provenance of those in the Vidal Quadras y Ramon Collection. Another coin, apparently of an identical type from the Garthe Collection, is mentioned by Cohen,⁷⁶ though unfortunately

⁷⁴ Paris Catalogue, Dec. 16, &c., 1913, No. 719.

⁷⁵ See Haverfield, *Victoria County History of Somerset*; and cf. Hill, *Num. Chron.*, 1906, pp. 337 seqq.

⁷⁶ *Monnaies Romaines*, ed. 2, viii, p. 98, No. 78, "Module 6½". The exergual legend is given as **SMLAP**, and the palm-branch is not mentioned. The exergual letters that appear on this group of coins are constantly omitted from Cohen's lists under Valentinian I, Valens, and Gratian. It is difficult to explain this omission. Gneecchi, *Medaglioni Romani*, i, p. 98, No. 32, gives the weight of this piece as 4.92 grm., and refers to it as "Già Coll. Weber". It is not in the Weber Catalogue, however.

the exergual inscription is given without its punctuation and the symbol is omitted.

The following is the description of the coin in my collection :

Obv.—**D. N. VALENTINIANVS P F AVG** Diademed bust to r., wearing cuirass and paludamentum (fastened by circular brooch with three pendants).

Rev.—**VOTIS V MVLTIS X** in laurel crown. In ex. **S. M. L. A. P.** and palm-branch. Wt. 5.25 grm. (c. 82 gr.). Diam. 25 mm. Pl. XX, Fig. 1.

The punctuation of the exergual inscription is indicated with exceptional fullness. The first and last elements, **S. M.** = *Sacra Meneta* and **P.** = *Prima*, refer to the *officina*. But, in place of the two connected intermediate letters with which these elements are in other cases associated on the coinage of the time, such as **TR**, **AQ**, **SD**, and so forth, denoting respectively the mints of Treves, Aquileia, and Serdica, we find the indication of the two initials **L. A.** answering to a double civic name. There is no Continental mint with which these letters are associated.

I venture to read the full inscription as follows :

**S[ACRA] M[ONETA] L[ONDINII] A[VGUSTAE]
P[PRIMA] sc. OFFICINA.**

The use of the double appellation fittingly corresponds with a period of transitional usage. On the Constantinian and earlier issues of the London mint the exergual inscription in one form or another refers to *Londinium*. On the pieces struck by Magnus Maximus A.D. 383-8 the name has become simply *Augusta*. It looks as if the official emphasis on the "Augustan"

name, of which we find the echo in the passages of Ammianus already cited, may have been part of Theodosius's scheme of renovation in the island.

According to all analogy we should expect that similar quinquennial pieces were also struck by the London mint in the name of Valens. It is indeed probable that such will come to light, and it will be shown below that silver pieces of this denomination with the London stamp were, as a matter of fact, struck in his name at the time of his Decennalia.

The following piece at any rate shows that such coins with Quinquennalia Vota were struck in the name of the youthful Gratian, who had been proclaimed Augustus in September 397. A specimen of this coin existed in M. de Quelen's Collection,⁷⁶ another in the Paris Cabinet is shown in Pl. XX, Fig. 3.

Obv.—D N GRATIANVS P F AVG Bust of the Emperor to the right, diademed, draped and in cuirass.

Rev.—VOTIS V MVLTI X in laurel crown.

In the ex. S. M. L. A. P. Wt. 5.15 grm.
Diam. 24 mm. Pl. XX, Fig. 3.

It is specially interesting to note in support of the attribution of the coin of Valentinian to the London mint that it commemorates his Quinquennalia, which took place in A.D. 368,⁷⁷ and that its issue thus corresponds with the date of the triumphal entry of his

⁷⁶ *Catalogue*, Paris, 1888, No. 2244. The exergual lettering is erroneously described in the text as S. ML. AP, but the phototype on the plate shows the true punctuation S. M. L. A. P.

⁷⁷ That the Quinquennalia of two Emperors were celebrated this year appears from the record of those of Valens preserved by the Oration of Themistios (*Or.* viii, πενταετηρίς). Cf. Clinton, *Fasti Romani*, i, p. 471.

great general into Londinium Augusta. The coin of Gratian was probably struck at the same date as that recording the Quinquennalia of his father, and on the same auspicious occasion in A.D. 368, though as a matter of fact little more than a year had passed since his elevation to the dignity of Augustus.⁷⁶ A close parallel to this is presented by the aureus struck conjointly by Gratian and Valens in A.D. 376 to commemorate the proclamation of the infant Valentinian II, and on which he is credited with Quinquennalia Vota.⁷⁹ Gratian himself, who reigned sixteen years, has coins bearing the inscriptions **VOT. XX MVLT. XXX.**⁸⁰ Valens, who reigned less than fifteen years, celebrates his Vicennalia Vota in the same way. The two earlier Vota (**V** and **X**) of Valentinian I and Valens, however, seem, as we shall see, to have been celebrated at their proper seasons.

It further appears that silver coins of the same large module were struck by both Valentinian I and Valens at the London mint at the time of their Decennalia.

The types are as follows :

VALENTINIAN I.

Obv.—**D N VALENTINIANVS P F AVG** Diademed bust to r., wearing cuirass and paludamentum.

Rev.—**VOTIS X MVLTIS XV** in laurel crown.

In ex. "**SMLAP**". (This is Cohen's reading⁸¹)

⁷⁶ Cf. Clinton, *Fasti Romani*, i, p. 468.

⁷⁹ I may refer to my observations on this coin in *Num. Chron.*, 1910, pp. 108, 109.

⁸⁰ Cohen, *op. cit.*, viii, p. 135, No. 77, who also cites a small bronze piece in Signor Gneecchi's Collection with the inscription **VOT. XX MVLT. XXX.**

⁸¹ Cohen, viii, p. 99, No. 80, refers to this coin as in M. Rollin's possession. No weight is given.

and no symbol is mentioned. It is practically certain, however, in view of the analogy presented by the parallel piece of Valens, that the inscription should be S. M. L. A. P. followed by a palm-branch.)

VALENS.

Obv.—D N VALENS P F AVG Diademed bust to r., wearing cuirass and paludamentum.

Rev.—VOTIS X MVLTVS XV in laurel crown.

In ex. S. M. L. [A.] P. and palm-branch. The "A." is here partly obliterated, but on the analogy of the other coins of this series can be safely restored.

Diam. 25 mm. The weight of this coin is abnormally low, 4.66 grm., but the deficiency may be partly accounted for by the small break in the margin.⁸² In the Paris Cabinet (Pl. XX, Fig. 2).

The date of the Decennalia Vota of Valens can be fixed with certainty from the eleventh oration of Themistios—*δεκαετηρικός*—addressed to the Emperor in Syria. In it the orator expressly refers to the conclusion of the cycle of ten years from the accession of Valens, which fixes the date to March 28, A.D. 373.⁸³ The London mint was, therefore, still functioning at this time, and it is probable that similar silver pieces were struck at the same time in the name of Valentinian I and of Gratian, though specimens of them do not seem to have come to light.

It will be observed that certain characteristics

⁸² This coin is described and figured by Cohen (viii, p. 118, No. 105). Cf. Gneecchi, *op. cit.*, i, p. 78, No. 36.

⁸³ Themistios, *Orationes*, *loc. cit.*; and cf. Clinton, *Fasti Romani*, p. 481.

common to this whole group of coins proclaim their issue to have been of an exceptional kind.

1. The coins are all of the larger class of silver pieces—double *siliquae*, that is, or *miliarensia*. Their module is about 25 mm., and their weight, so far as recorded, varies from 5.25 to 4.66 grammes.

2. They were all struck at the time of the *Quinquennalia* and *Decennalia Vota*.

3. They bear, apparently in all cases, the palm-branch symbol after the indication of the civic name. This appears also on the London *solidi* of Magnus Maximus, rising above the exergual line.

It is by no means improbable that further issues of the same kind from the London mint will be ultimately brought to light covering the period from 373, the date of the *Decennalia* of Valentinian and his colleague, to A.D. 383, when Magnus Maximus made use of it under the sole title of Augusta. The coins that we should look for in the first instance would be double *siliquae* of Valens with the inscription **VOTIS XV MVLTIS XX**, of Gratian with decennial or later *Vota*, and of Valentinian II with his earlier *Vota*, though no large quinquennial pieces of that Emperor seem to be known.

A *solidus* of Valentinian I from the Paris Cabinet is described by Cohen²⁴ as presenting the exergual inscription **LONSA**. It represents on the reverse the common type of the Emperor holding a standard and a small figure of Victory. As however the "SA" is enigmatic, and other coins of this particular variety showing the standard without the Christian monogram

²⁴ viii, p. 90, No. 24.

are so far as is known from the Eastern mints, it is well to place this solidus to "a reserve account".

For reasons given in the succeeding Section there seem to be good grounds for concluding that even if there was a break in the London coinage during the interval of ten years from 373 to 383, the mint itself may have continued to perform other functions connected with the assaying and weighing of silver ingots destined for the more prolific Continental centres.

The revival of the London mint under its new name of "Augusta", for actual coinage by Magnus Maximus seems to have been of a less limited character than that of Valentinian and his colleagues. That double siliquae celebrating his Quinquennalia (whether anticipated or not) were struck by him here is made probable by the existence of his siliqua from the North Mendip Hoard with the inscription **VOT V MVLT X**. But in addition to this we have the siliqua from the same hoard with the inscription **VICTORIA AVGG** (confined to his British mint) and his gold solidi with the same inscription.

§ 7. THE BAR AND INGOT CURRENCY IN THE WESTERN EMPIRE AT THE CLOSE OF THE FOURTH CENTURY.

It should be borne in mind that the Roman Provincial mint officials—and, perhaps in an exceptional degree, those of Britain—had other functions to perform besides the actual striking of coins. They had also important duties connected with the refining and warranting of precious metals, brought to the mint in a more or less crude form.

This form of activity indeed had been considerably extended since Constantine's time, owing to various

enactments of that Emperor and his successors, in accordance with which fines were made legally payable not only in coin but in gold or silver weight.⁸⁵ The weight reckoning in gold and silver largely superseded the earlier practice of reckoning by folles, and payments to the Imperial Treasury were made on this basis. Further, in order to facilitate such payments, the practice also arose of melting down bullion and converting it into bars or ingots of a duly refined standard attested by the stamps of mint officials.

The classical example of gold bars of this class is due to the discovery in 1887 of sixteen specimens of such in the Haromzek County of Transylvania.⁸⁶ The gold of these bars was 98 per cent. pure, and their weights, in all cases different, ranged from about 100 to over 500 grammes.

⁸⁵ *Cod. Theod.*, xii. 6. 2; xii. 7. 1; vi. 22. 2; ix. 17. 2; and cp. H. Willers, *Num. Zeitschr.*, xxx. 211, 212.

⁸⁶ F. Kenner, *Römische Goldbarren mit Stempeln* (*Num. Zeitschr.*, xx (1888), pp. 19-46, and Plates ii, iii, iv); and cp. *Arch.-Ep. Mittheilungen aus Oesterreich*, xiii (1888), pp. 1-24; Mommsen, *Goldbarren aus Sirmium* (*Z. für Numismatik*, xvi (1888), pp. 331-8); Willers, *Num. Zeitschr.*, xxx (1898), pp. 222, 223, and xxxi (1899), p. 38.



FIG. 3. Gold bar from Haromzek Hoard with stamps of Sirmian Mint. (From *Num. Zeit.*, xx.)

One of these bars is shown in Fig. 3. The metal of these bars, cast in a mould, had been stamped after it was cooled by officials of the Sirmian mint. One of the stamps employed shows the facing busts of two adult Emperors and a boy, a combination which would agree with the association of Gratian by Valentinian I and Valens in A.D. 367, or with that of Valentinian II by Valens and Gratian in 375, or again, of Gratian, Theodosius, and Valentinian II in 378.⁸⁷ On another stamp the "Tyche" of the city of Sirmium is seen seated, with the name appended.

The first stamp on the bars, bearing the name of the mint official Lucianus,⁸⁸ certifies the metal as "obryzum" or "red gold", the Christian monogram being added as a further sanction. The letters **OBR** indeed that here appear are a fuller form of the **OB** first introduced on to the gold coinage by the

⁸⁷ Kenner (*op. cit.*, p. 29) has Valentinian I, Valens, and Gratian. Mommsen, *op. cit.*, pp. 352, 353, adds, as preferable, the alternative of Gratian, Theodosius I, and Valentinian II (378-83). The Sirmian mint still existed in Theodosius I's time (cp. Cohen, viii, p. 159, No. 37, exergual legend **SIROB**).

⁸⁸ The inscription reads **LVCIANVS OBR. .I. SIG P.** Mommsen, *op. cit.*, suggests, doubtfully, that **I** = *primum*, as showing that this was the first stamp impressed on the bar. He altogether rejects Kenner's interpretation "*primae (notae)*" = i.e. refined gold of the first standard, referring to the mark on the touchstone. I venture to suggest that the inscription should read **LVCIANVS OBR[YZIARIVS] PRIMVS SIG[NAVIT] CHRISMATE**, and as indicating that Lucianus signed as the first of the officials to whom actual assaying had been entrusted. It finds, in fact, a perfect analogy in the **OF. PRIMVS** (*Officiator primus*) on the silver ingot from the Treves mint described below, p. 497. *Obrizarius* occurs in Glosses. (Du Cange, s.v.) From the further existence of the word *obriziatus* ("solidos obriziatos," Du Cange, s.v.) it seems possible that the title *obriziator* may have also existed.

Valentinian dynasty as a guarantee for the standard fineness of the gold used for the solidus and its parts.⁸⁹ This appears appended to the civic indication in the exergue by both Eastern and Western mints,⁹⁰ and it is interesting in the present connexion to recall that Magnus Maximus added to such exergual inscriptions already known **AVG OB** for the London mint.

There is evidence that in the period to which the Sirmian bars belong the *obryzum* of the mints was under the general charge of a special monetary official of the dignity of *Comes*. Already in Valentinian I's time we see the inscription **COM** ousting the indication of the civic name from the exergue, and relegating it to a secondary position in the field, on coins of Treves, Lyons, and Milan. Under his successors, beginning with Valentinian II and Theodosius, the fuller form **COM OB** becomes usual as the exergual mark in various mints belonging to both halves of the Empire. Numismatists are by now well acquainted with the felicitous reference of Willers⁹¹ in this connexion to a late Roman collection of official abbreviations appended to that of the earlier grammarian Probus,

⁸⁹ Possibly, as suggested by Willers, *Z. f. Num.*, xxxi (1899), pp. 49, 50, the **OB** on solidi should rather be regarded as the equivalent of *solidus obryziacus* (cp. *Cod. Just.*, xi. 11. 3 "obryziacorum omnium solidorum uniforme pretium"; *Cod. Theod.*, vii. 24 "in una libra auri septuaginta duo obryziaci").

⁹⁰ Namely, those of Constantinople, Antioch, Thessalonica, Sirmium, Aquileia, Milan, and Treves.

⁹¹ *Num. Zeitschr.*, xxx (1899), pp. 44, 45. The text of the annotations as given in Keil's *Grammatici Latini*, vol. iv, appears in the somewhat corrupt form **COM. OB**, *Comitia obryziaca*; **C. O. M.**, *Comiti obridriaca*; **OB**, *obryziacum*; **O. B.**, *obridriacus*;

O. B. but Willers's emendation seems quite satisfactory. **COM.** by itself is given as the equivalent of **COMES**.

where **COM OB** is interpreted as **COMITIS OBRY-ZIACVS**, that is, "the standard gold solidus of the Comes". Whether this official is the "Count of the Sacred Largesses" or his subordinate the "Comes Auri" mentioned in the *Notitia* of the Western Empire⁹² is more difficult to determine. It is in favour of the former supposition, however, that there exists a standard gold weight or *exagium solidi* with the triple busts of Honorius, Arcadius, and Theodosius II, the reverse of which bears the inscription **EXAG[IVM] SOL[IDI] SVB VI[RO] INL[VSTRI] IONANNI COM[ITE] S[ACRARVM] L[ARGITIONVM]**.⁹³ The administration of the mints as a whole was under the last-named official.

The second class of stamp on the Sirmian bars bears the names of monetary officials who seem to have controlled the work of the former officer, to whom perhaps was entrusted the actual refining of the metal. One variety bears the inscription:

**FL FLAVIA
NVS PRO
SIG AD DIGMA** ✠

This stamp is ascribed by Mommsen⁹⁴ to the *Procurator*

⁹² This is Willers's suggestion (*Num. Zeitschr.*, xxxi (1899), p. 45).

⁹³ Sabatier, *Médailles Byzantines*, i, Pl. iii. 9; Cohen, viii, p. 191. 8 (see, too, *Num. Chron.*, 1878, Pl. ii. 3).

⁹⁴ *Z. für Num.*, xxx (1898), p. 223, and xxxi (1899), p. 38. The existence of Imperial officials called *probatores* is ascertained. The Greek equivalent of *probator* was δοκιμαστής. Willers appositely cites Jeremiah vi. 27 "Probatores dedi te in populo meo robustum; et scies et probabis viam eorum . . . Defecit sufflatorium, in igne consumptum est plumbum; frustra conflavit conflator, malitiae enim eorum non sunt consumptae. Argentum reprobum vocate eos, quia Dominus proiecit illos." In the Greek translation here *probator* is δοκιμαστής and *argentum reprobum* ἀργύριον ἀποδοκιμασμένον.

Monetae, who, as we know from the *Notitia*, was the principal mint official. Willers, however, has given good reasons for referring it to the Probator = assayer, a monetary title of which there is also evidence.⁹⁵ This officer here appears to certify the fact that the gold of the bars is "up to sample" (**AD DICMA**⁹⁶), and it is of special numismatic interest that the symbol which follows his signature is the palm-branch. On another stamp, which takes the place⁹⁷ of this on some of the bars, the names of two officials appear with that of Sirmium appended, and two symbols, the palm-branch and star—the palm, however, taking the place of honour.

The use of this symbol as the mark of the principal controller of the standard explains its frequent appearance on coins of this period, both of the East and West.⁹⁸ In the West it is found not only at Sirmium itself, but at Thessalonica, Rome, Aquileia, Milan, and Treves. We may therefore assume that the appearance of the palm-branch in a similar position on the coins of the London mint, described above, must also be taken as the special mark of the *Probator Monetae*.

⁹⁵ *Op. cit.*, p. 354. A stamp, moreover, on one of the gold bars from the Aboukir find reads **/// ANTIVS [P]ROBAVIT**. The inscription in this case appears in a shallow impression above and below a more deeply punched stamp reading **ACVEPPSIC**—i.e. the stamp of the *Signator*. See Hill, *Proc. Soc. Ant.*, xx, pp. 92 seqq. The Aboukir bars date from the age of Diocletian.

⁹⁶ *Digma* = *deigma*.

⁹⁷ It reads **QVIRILLVS | ET DIONISVS | * SIRM ☿**

⁹⁸ For a conspectus of its usage see Kenner, *op. cit.*, pp. 40, 41. The secondary controlling official of the bars apparently used the star as his mark, which also is of frequent appearance in connexion with exergual inscriptions on contemporary coins (*op. cit.*, pp. 41, 42).

It must have the same significance on the solidus of Magnus Maximus with the name of Augusta, where it rises above the exergual line, as in other contemporary gold pieces of similar type.

Sanctioned thus in the same way by the Imperial effigies, stamped by the same monetary officers and with a similar certificate of the metal as "obryzum", it will be seen that such bars were by this time as much a part of the official currency of the Empire as the coins issued from the same mints. They represented various weights of precious metal of a very high standard of guaranteed purity. Their fabric itself was much more economical than that of struck coins of an equivalent value, and in large amounts paid by weight they were a distinct convenience.

The evidence of similar vehicles of currency in silver with the same official guarantee of purity was subsequently afforded by the discovery in 1898 at Dierstorf, north of Minden, of three ingots stamped by *offinatores* of the Roman and Treveran mints.⁹⁹ The ingots—with incurved sides of very ancient tradition, somewhat resembling early double axes—were three in number, weighing respectively 299.73, 309.5, and 309.81 grammes. The first ingot bears a stamp with three Imperial busts, the central one facing, the other two, one of them of a young boy, in profile, and both the style, the comparative ages, and the grouping correspond with *exagia solidi* or solidus weights attributed to the end of the fourth

⁹⁹ H. Willers, *Römische Silberbarren mit Stempeln* (Num. Zeitschr., xxx (1898), pp. 211 seqq., and xxxi (1899), pp. 35 seqq.). The ingots were first erroneously said to have been found at Nendorf.



FIG. 4. Silver ingots with stamps of the Roman and Trierian Mints; Dierstorf Find.
(From *Nova, Zeit. xxx.*)

or the beginning of the fifth century.¹⁰⁰ It is possible that we have here Theodosius the Elder and his two sons, Arcadius and Honorius, the latter of whom, then a boy of ten, was associated in A.D. 394.¹⁰¹ The further stamp on this ingot presenting the seated figure of Rome and the legend **VRBS ROMA** should, on the analogy of the similar figure of Sirmium on the gold bar, connect it with the Roman mint. The quality of the metal is further attested by the mint official Paulus as "white" or "fine" silver **CAND[IDVM ARGENTVM]**.

The other two ingots from this find, of nearly equal weight, both bear official stamps of the Treves mint. They are of special interest in the light they throw on the mint-marks of a series of silver pieces that

¹⁰⁰ Compare, especially, Sabatier, *Monnaies Byzantines*, i, Pl. iii, Figs. 4, 5. These two *exagias solidi*, as well as Figs. 6-9, on which all three heads are facing, are attributed by Sabatier to Arcadius, Honorius, and Theodosius II (made Augustus in 408 when one year old). The prominence of the central bust seems to me, however, to agree better with the association of Honorius, Arcadius, and Theodosius I. This is also the attribution suggested by Cohen (viii. 264).

¹⁰¹ Seeck, indeed (cited by Willers, *op. cit.*, p. 217), regarded the profile head to the left as that of an empress, and would therefore recognize here Galla Placidia, Theodosius, and the young Valentinian III. In this case the date could not be earlier than A.D. 425—about half a century later than the Sirmian bars, which otherwise present such parallel features. But the object which he takes to be a wreath above the head to the left, and which he would therefore compare with the small wreath held by a hand often seen above the head of Galla Placidia and of other empresses of the same period, seems to me to be simply an exaggerated version of the circular jewel of the usual Imperial diadem. In profile heads, especially at the end of the fourth and the beginning of the fifth century, this feature is often much exaggerated. There is, moreover, no trace of the hand and wrist. The style of the work and notably the seated figure of Urbs Roma seem to me to be of distinctly earlier date.

first make their appearance in the last half of the fourth century.

The stamp on one of these ingots bears the inscription **OF. PRIMVS. TR. PVS. PI**, no doubt correctly interpreted by Willers *Of(ficinator) primus Tr(everorum), pus(ulati) p(ondo) I = unum or una libra*. The stamp on the other ingot reads . . **PRIS(S)CI. TR PS** **P. I**, conjecturally completed . . *Prisci(anus) Tr(everorum) p(u)s(ulati) (P)ondo (U)num*.

Pusulatum, sometimes *pustulatum*, was the regular name for silver refined by the process of cupellation, the surface of which in consequence of this presented a pimpled or "pustuled" appearance. Classical scholars will recall Martial's lines referring to Spanish silver:

"Nulla venit a me

Hispani tibi libra pustulati."¹⁰²

Even more apposite is the passage in Suetonius recording Nero's whim to have nothing but newly minted coin: ". . nummum asperum, argentum pustulatum, aurum ad obrussam."¹⁰³ We have here coupled the two technical expressions for pure silver and gold, afterwards taken over into official stamps and dies.

The abbreviated form **PS** given for *pusulatum* on the last-mentioned ingot at once explains the appearance of these letters after the indication of the mint on silver pieces, of which the first were struck by Valentinian and his colleagues in the Western mints. Such are **TR PS**, as on the ingot at Treves, **LVC PS** at Lyons,

¹⁰² Lib. vii, Ep. 86, ver. 6, 7, and cp. viii, Ep. 51, ver. 6.

¹⁰³ Suetonius, *Nero*, c. 44. 2.

AQ PS at Aquileia, **MD PS** at Milan, **SISC PS** at Siscia. To these, on the siliqua already referred to, Magnus Maximus added **AVC PS** at the London mint. From Honorius's time onwards the practice was also adopted at Rome and Ravenna, as we see by the frequent exergual legends **RM PS** and **RV PS**.

We have here then two silver ingots representing, as appears from the inscriptions themselves, pound weights, though of a very reduced kind, viz. 309.5 and 309.81 instead of 327 grammes. The gold value of a pound of silver was fixed by a decree issued in the name of Arcadius and Honorius at Constantinople in A.D. 397 as five solidi,¹⁰⁴ and the weight of these solidi was, as we know at this time, correspondingly reduced. It will be seen that these silver ingots are even more closely assimilated to ordinary currency than the gold bars. Not only do they bear the official stamps of the Treveran mint certifying the standard purity of their metal, but they represent a fixed weight, and that weight the equivalent of a fixed amount of gold coin.

§ 8. THE LATEST COINAGE OF ROMAN BRITAIN AND THE
RELATION OF THE MINT AND TREASURY OF LONDON
TO THE CURRENCY OF SILVER INGOTS.

That the London mint should have been largely occupied with the assaying and certifying of such bars and ingots is the more probable when we remember the important part that the silver mines of

¹⁰⁴ *Cod. Theod.*, xiii. 2. 1, *De Argenti pretio quod thesauris inferitur*: "Iubemus ut pro argenti summa quam quis thesauris fuerat inlaturus inferendi auri accipiat facultatem, ita ut pro singulis libris argenti quinos solidos inferat."

the West seem to have played in the inner economy of Roman Britain. That the lead-mining district of the Mendip, of which Charterhouse is the best known example, was primarily worked for the extraction of silver appears certain from some of the stamps found on the lead pigs themselves, such as the well-known example reading IMP(eratoris) VESPASIANI AVG(usti plumbum) BRIT(annicum) EX ARG(entariis) VE. In this and other districts, moreover, which were the scenes of Roman lead-mining operations, copper ores occur in close proximity to the lead ores, "and must occasionally have been smelted with them".¹⁰⁵ The traces of furnaces for refining silver found at Silchester show that the metal in that case was extracted by a special process of cupellation from ore in which copper formed a large ingredient.¹⁰⁶

At Charterhouse itself the Roman mining activity seems to have been greatest in the earlier periods of the occupation, and hardly extends, if we may judge from the coins and other relics there found, beyond the Constantinian age.¹⁰⁷ But the continued prosperity in the Mendip region seems to be clearly reflected in the great hoards of Roman silver coins of the middle and latter part of the fourth century, or even the beginning of the fifth, that have been there brought to light.¹⁰⁸

¹⁰⁵ In Shropshire, Montgomeryshire, Flintshire, and Anglesey, according to Professor Gowland, Roman lead-mining operations were carried on in the same association.

¹⁰⁶ W. Gowland, "Remains of a Silver Refinery at Silchester" (*Archaeologia*, 1900, pp. 113-24).

¹⁰⁷ See Haverfield, *Victoria County History, Somerset*, pp. 338, 339.

¹⁰⁸ A summary account of the Somerset hoards is given by Professor Haverfield (*op. cit.*, pp. 354, 355). Similar hoards have been found, one in Worcestershire, one in Berks., two in Hants,

These abundant discoveries of hoards of silver coins belonging to the latest period of Roman rule in Britain are the more remarkable in contrast with the paucity of such discoveries in the Continental parts of the Empire. Mr. Hill, in referring to this group of finds in his account of the Grovely Wood find in 1906, was only able to cite two foreign hoards of the same kind.¹⁰⁹ One, consisting of *siliquæ*, which is said to have been derived from "some unknown place on the Lower Danube", has been described by Missong;¹¹⁰ the other, comprising not more than a dozen similar pieces, is from Cazères-sur-l'Adour.¹¹¹

How then are we to account for the singular limitation of such discoveries of hoards of late Roman silver coins to Britain—a limitation also largely shared by similar hoards of gold coins? And how particularly are we to explain their most frequent occurrence in a comparatively poor part of our West country—the wolds and marsh-lands of the Mendip district of Somerset? The problem has puzzled both numismatists and historians.

It does not seem unreasonable, however, to connect these signs of well-being, and especially of the abundant circulation of a silver coinage, with the continued activity of the silver-mining industry in the Mendip district. It may indeed be suggested that important Treasury officials took over the crude or partially

one in Wilts. (Grovely Wood)—all these more or less in the West of England. Two have been found in Norfolk, while one (referred to below) is from Coleraine in Ireland. (Cp. G. F. Hill, *Num. Chron.*, 1906, p. 338.)

¹⁰⁹ *Num. Chron.*, 1906, pp. 338, 339.

¹¹⁰ In *Wiener Numismatische Monatshefte*, 1868.

¹¹¹ *Bull. de Num.*, 1895, p. 23.

refined metal at a fixed rate from the contractors or private proprietors who worked the mines, giving the legal equivalent in current coin of the same metal.

The other factor in the exceptional phenomenon presented by the occurrence of these British hoards is to be found in the divergent course of our insular history. Whereas in other parts of the Western Empire the supreme catastrophe which put an end to Roman dominion did not take place till the middle and third quarter of the fifth century, in Britain it already anticipated itself in the middle of the third. Already as a result of the invasions of Julian's time the island seemed about to be divided up between Picts and Scots and Attacotti and Saxons. The victories indeed of Valentinian's great general gave Roman life in Britain a respite, but the renewed raids and the successive withdrawals of the legions by Stilicho and Constantine III in the first years of the fifth century were rapidly followed by its final overthrow.

But both the first and the second of these main tides of barbarian invasion in Britain took place at a time when, at any rate in the mining district referred to above, there was a considerable amount of silver currency for the panic-stricken inhabitants to hide in the earth. In Gaul and other Continental regions where the final blow fell somewhat later on in the fifth century there was practically no silver currency to stow away. It is a significant fact that no silver issues of Honorius bear a reference to any date beyond his third Quinquennalia; in other words, there seems to have been a great cessation of silver coinage in or shortly after A.D. 408—almost the exact

date of the crossing of the adventurer Constantine III¹¹² from Britain to Gaul with what remained of the Roman garrison. If we examine the coinages of Honorius's successors, such as Johannes, Valentinian III, Avitus, Majorianus, Libius Severus, Glycerius, Julius Nepos, and Romulus Augustulus, nothing is clearer than that the gold pieces are of very much more frequent occurrence than the silver.

The natural question arises whether the shortage in the Imperial silver supply that makes itself apparent simultaneously with the loss of Britain may not itself have been largely due to that event. The evidence of an extensive circulation of specie in precious metals in the silver-mining region of the West may fairly be taken as an indication of a considerable output there well on into the reign of Honorius.

It has been assumed above, as an explanation of the existence of these large hoards of silver coins, that the Imperial Treasury officials were in the habit of paying for the metal extracted its equivalent in silver money. Pigs and ingots might also be paid for in gold, but it is obvious that the chief proprietors or farmers of the mines needed lesser change for distribution among their subordinates. The crude or partially refined material thus purchased by the Treasury officials was in its turn handed over to the mints. By these it could either be converted into coin or into stamped ingots which formed in fact part of a regular currency. We have seen that those of the Dierstorf find not only bear the official stamps of the Treves mint cer-

¹¹² The revolt of Constantine took place in A. D. 407.

tifying the standard purity of the metal, but each represent a pound weight.

We must conclude that the London Mint, or, if that was closed, the London Treasury, was in the same way largely occupied with the assaying, weighing, and stamping of similar ingots, and the larger the proportional output of silver in Britain the greater the amount of work thus thrown on the officials. Such certified silver ingots may indeed have been chiefly used to supply the material for coinage in the more prolific mints of the neighbouring Continental provinces—in a principal degree probably at Treves itself. The contents of the great silver hoards of this period found in Britain show indeed a great preponderance of coins struck at Treves, Lyons, and Arles.

After the death of Magnus Maximus in A.D. 388 there is every reason to suppose that the issue of coins in the name of Augusta was discontinued. In the *Notitia Dignitatum*, drawn up in the time of Honorius, only three *Procuratores Monetarum* are mentioned in the Prefecture of the Gauls, namely, at Treves, Lyons, and Arles. The probability indeed might suggest itself that Constantine III, who was elevated to the purple in Britain and made it the starting-point for Continental dominion in the same way as Magnus Maximus, might, like him, have begun his career by an issue of coins with his effigy on the British Augusta. The simultaneous issue of a coinage quite out of proportion to the material results afterwards achieved was indeed the usual practice of such Pretenders to the Empire, so that ephemeral careers like those of Procopius, for example, have left a fairly abundant numismatic record.

A *prima facie* case, and to a limited extent a good case, may indeed be made out for regarding the certain mint-marks on coins of Constantine the Third as having reference to the British mint with the restored name of Londinium. A parallel for this might be found, moreover, on the Gallic issues where **AR** for Arelate alternates with abbreviations of Constantina—the almost universal monetary form since the middle of the fourth century, and adhered to on the coinage of Honorius. On Constantine's *siliquae* we find the exergual lettering **SMLD** and **LDPV** (Pl. XX, Fig. 18).¹¹² The letters **L-D** also appear in the field of one of his *solidi* bearing the exergual inscription **COMOB**.¹¹⁴ The regular abbreviation for the Lyons mint on the exergue is **LVG** or **LVGD**, and in certain cases this was adhered to on the coinage of Constantine III himself. A rare gold *solidus* of his bears the inscription **SMLVG**¹¹⁵ in this position, and a small bronze piece **LVGP**.¹¹⁶

The centres of Constantine's activity were however so much on the Continental side that, in default of clearer evidence, it seems nevertheless safest to assign these types with **LD** to the Lyons mint. In the field, at least, this was the natural abbreviation for Lugdunum,

¹¹² *B. M. Collection*; *Rev.* **VICTORIA AA V GGG**. From the Coleraine hoard (*Num. Chron.*, 1855, p. 115), there were two specimens with similar reverses. The abbreviation **PV** for **PV[SVLATVM]** is also found on Constantine's Milan *siliquae* of this type (Cohen, viii, p. 199, No. 7).

¹¹⁴ Cohen, viii, p. 199, No. 5. A *solidus* of this type from the Eye find is in my own collection.

¹¹⁵ Cohen, viii, p. 198, No. 1. *Rev.* **RESTITVTOR REIPVBLICAE** (Freiburg Museum).

¹¹⁶ *Op. cit.*, p. 199, No. 3. *Rev.* **VICTORIA AVGGG**. "M. Recamier. P. B. Q."

just as we find **MD** for Mediolanum, and the exergual usage may have become assimilated to this. A triens of Valentinian II¹¹⁷ and solidi of Eugenius¹¹⁸ also exist with **L-D** in the field.

Among the exergual inscriptions of siliquae of Constantine III of the ordinary type¹¹⁹ Cohen also mentions **SMAP** and **SMLP**, but whether these are to be connected with the London mint under one of its alternative names must be left an open question. They certainly suggest a concurrent usage like that exemplified by the **S. M. L. A. P** of Valentinian's time. In any case, however, the following siliqua in the British Museum has considerable claims to be regarded as having issued from the London mint under its earlier title:

Obv.—**DN CONSTANTINVS P F AVG** Diademed bust in cuirass and paludamentum to r.

Rev.—**VICTORIA AA V CCG** Roma seated to l. holding spear and Victory on globe; in ex. **S M L O.** Pl. XX, Fig. 19.

What may be regarded as the last trace of Roman coinage in Britain was pointed out by me some years since to this Society.¹²⁰ This evidence is afforded by a small bronze piece found at Richborough and of somewhat barbarous fabric, but presenting on both obverse and reverse a definite inscription in a style which best accords with the early part of the fifth century. This remarkable coin reads on the obverse

¹¹⁷ Cohen, viii, p. 145, No. 49. *Rev.* **VICTORIA AVGV-STORVM** (French Cabinet).

¹¹⁸ *Op. cit.*, p. 173, No. 6.

¹¹⁹ *Op. cit.*, p. 199, No. 4. *Rev.* **VICTORIA AVCCG.**

¹²⁰ *Num. Chron.*, 1887, pp. 191 seqq.

DOMINO CARAVSIO CES, and on the reverse DOMIN. CONXTA[NTI]NO (Fig. 5). In the reverse inscription I venture to see a reference to Constantine III, in the "Dominus Carausius Caesar" of the obverse the name and title of some *tyrannus* who had sprung up in the island at the moment—A.D. 409—when it had been practically cut adrift from the rest of the Empire. Of the continued existence of the historic name of Carausius in the island we have indeed direct evidence in the inscribed tombstone¹²¹ found at Penmachno in Caernarvonshire recording the sepulture of a Christian and later Carausius



FIG. 5. Bronze coin of Second Carausius found at Richborough.

beneath a cairn. But no mint-mark is visible on the coin referred to.

To the persistence of the Roman authority in Britain in the early part of the fifth century we have a curious testimony in the inscription which from its late character was included by Dr. Hübner in his *Inscriptiones Britanniae Christianae*, referring to the erection of a Castrum at Ravenhill, near Whitby, by a certain Justinianus, Praepositus (Militum). This Justinianus seems to have been the officer of Constantine III who, accompanied by Nevigastes, was sent forward with the

¹²¹ *Inscriptiones Britanniae Christianae*, p. xx. Placed by Hübner among inscriptions written *more Romano* rather than *more Britanico*, and therefore early of its class.

vanguard of his forces at the time of his expedition into Gaul.¹²²

A tombstone recently found at Penmachno,¹²³ and belonging to the same class as that of the Christian Carausius at the same place, carries the tradition of Roman official usage in Britain down to at least the middle of the sixth century. The remaining part of the mortuary inscription reads **FILI AVITORI**,¹²⁴ and bears the cross entry

IN TE(M)P[ORE]
IVST[INI]
CON[SVLI(S)]

This refers to the Consulate of the Emperor Justinus in A.D. 540, which was used to fix the beginning of an era at Lyons until the opening of the seventh century.¹²⁵

Though, so far as our information at present goes, the Roman mint at London, except for these possible short revivals, ceases after the time of Magnus Maximus, there is evidence in the *Notitia* of the continued existence of a high Treasury official in Britain whose seat was at "Augusta". Following on

¹²² I suggested this identification in *Num. Chron.*, 1887, p. 209.

¹²³ See Sir John Rhys's account, *Athenaeum*, Sept. 25, 1915, p. 213.

¹²⁴ This is equivalent to the mediaeval Irish *Mac Uidhir*, or, in modern Anglo-Irish, Maguire (Rhys, *loc. cit.*).

¹²⁵ Goyau, *Chronologie de l'Empire Romain*, cited by Rhys, *loc. cit.* Rhys suggests that the sepulchral inscription itself may have belonged to the latter half of the sixth century, and that the chronological note might be slightly later—i.e. the beginning of the seventh. But he admits that the lettering of both is practically identical.

the "Praepositi thesaurorum per Gallias" is the entry

"In Britanniiis

Praepositus thesaurorum Augustensium".¹²⁵

The use of the word *Augustensium* here instead of *Augustae* is interesting, and is paralleled in other cases such as *Lugdunensium*, *Arelatensium* in the same connexion. It is clear that this Treasury official must have been charged with all fiscal arrangements regarding the mining industry in Britain. In the absence during the period that followed the death of Magnus Maximus in 388 of any Roman mint in the island, it is evident that silver ingots could no longer be officially assayed and stamped in the manner followed for example by the mint at Treves. But the Treasury at Augusta may well have authorized the issue of ingots of proper quality and weight, duly stamped with the names of certain privileged *officinatores*.

That this method of procedure was in fact adopted may be gathered from the discovery in the British islands of a series of silver ingots of this class belonging to the period in question, and which, from their discovery in each case in association with contemporary coins, were evidently regarded as part of the lawful currency.

§ 9. SILVER INGOTS OF THE CLOSE OF THE FOURTH AND BEGINNING OF THE FIFTH CENTURY DISCOVERED IN THE BRITISH ISLANDS.

A brief enumeration of the stamped silver ingots discovered in the British Islands may be here given.

The earliest is that communicated in 1778 to the

¹²⁵ *Notitia Dignitatum*, Oc. xi. 36, 37.

Society of Antiquaries by its President, J. Milles,¹²⁷ which was found in September of the preceding year in the Tower of London "in digging for the foundations of a new office for the Board of Ordnance". Having sunk to a great depth, and broken through foundations of ancient buildings, the discovery was made on the natural ground, and, as is supposed, even below the level of the present bed of the river. The find consisted of the silver ingot reproduced in Fig. 6 and three solidi, two of Arcadius and one of Honorius. The latter were of the common type,¹²⁸ with the reverse legend **VICTORIA AVGGG** and **COMOB** (= *Comitis obryziacus*) in the exergue. The solidi of Arcadius bore in the field the letters **R-M** and **M-D**, that of Honorius **M-D**, showing that they were respectively from the mints of Rome and Milan.

The ingot (Fig. 6), of the usual double-axe like shape,—"4 inches long, 2½ inches in the broadest part and 1½ in the narrowest"—had been first cast, then beaten out to quite fine edges at the ends. In the centre it bears a stamp with the inscription

**EXOFFE
HONORINI**

This seems to be a miswriting for

**EXOFFI
HONORINI** = *Ex Off(cina) Honorini*.¹²⁹

¹²⁷ *Archæologia*, v (1779).

¹²⁸ Emperor holding standard and globe and setting his foot on a captive. Sabatier, *Méd. byz.*, Pl. iv. 2 (Arcadius); Cohen, viii, p. 185, No. 44 (Honorius).

¹²⁹ Haverfield, *Addimenta Quinta C. I. L.*, vii, p. 640, ad C. n. 1196; H. Willers, *Num. Zeitschr.*, xxxi, p. 369 (*Bronzeimer von Hemmoor* (1901), pp. 237 seqq.) had suggested **EX OF FL**. The inscription was courageously read by Milles (*op. cit.*, p. 292) "**EX OFFIC HONORII**".

On the other side the ingot is scored in the middle as if indicating the place where it might be cut in half.

Its weight as given by Milles is 11 oz. 7 dwt. 6 gr.¹²⁰ = 323.481 grammes. At present it is somewhat less—320.12 grammes—but there are signs of a slight flaking off at the edges which may account for the difference.



FIG. 6. Silver ingot found in the Tower of London.

It is clearly intended, like the Dierstorf ingots, to represent a pound weight, and shows a somewhat fuller measure.¹²¹

¹²⁰ "Of the Tower pound." He also gives its weight as "4,992 Troy grains". The ingot is now in the British Museum.

¹²¹ The analysis of this ingot as given by Willers (*Num. Zeitschr.*, 1899, p. 376) is as follows:

Silver	95.82 per cent.	Iron	0.04 per cent.
Gold	0.62 ..	Tin	traces.
Copper	2.91 ..	Zinc	traces.
Lead	0.49 ..		

From the occurrence of the solidus of Honorius it appears that this deposit took place in or after A. D. 393.

In connexion with the find on the site of the Tower of London must almost certainly be taken a discovery made in 1781 at Bentley Priory, near Stanmore, Middlesex. It consisted of a hoard of fifty Roman gold coins (*solidi*) dating from Constantine Junior or Constantius II's time onwards, "some small silver and copper coins of Valentinian", two finger-rings and a bracelet of gold, and a "plate or piece of silver inscribed **HONOR**, set in a triangular frame of iron".

We have here similar associations to those of the Tower hoard, and there is every reason to believe that the last item represents a half-ingot of the same type as that above described.

It will be seen from Fig. 6 that, in order to divide such an ingot in halves, a cut would be made across the middle of the stamp in its narrow part—between the **EX OFFI** and the **HONORINI** of the inscription. Owing to the axe-like expansion of the ends each half would present a sub-triangular appearance, and the impression of the three last letters of **HONORINI** may well have been imperfect. The triangular iron frame probably represents part of the iron binding of some small chest that had become attached to the half-ingot by oxidization.

The gold coins as described in Gough's *Camden* were of Constantine Junior, Constantius, Valentinian, Valens, Gratian, Magnus Maximus, Theodosius, and Arcadius, and this description has been universally followed.

A coin, however, attributed to Constantine the Younger, is thus described :

Obv.—**FL CL CONSTANTINVS AVG** Head of Emperor.

Rev.—**VICTORIA AVGGG** Emperor holding labarum and treading on captive.

About this piece it must be observed that both the obverse and reverse inscriptions belong to Constantine III, in whose reign, moreover, the reverse type of the Emperor holding a labarum and trampling on a captive is frequent, while in Constantine II's time it was unknown. The coin is in fact a variety of a solidus type of Constantine III given by Cohen.¹²² The reference to four Augusti on the reverse of this coin places its date after 408, the year of Constantine's association of his son Constans, slain like himself in 411. The Stanmore hoard dated therefore from about the close of the first decade of the fifth century.

Another remarkable find of this class was made in April 1854, near Coleraine, in the County of Londonderry, and an account of the discovery was shortly afterwards laid before this Society by Mr. Scott Porter, who had previously communicated it to the *Ulster Journal of Archaeology*.¹²³ The deposit was made in

¹²² Cohen, vol. viii, p. 199, No. 5. The obverse legend in this case is **DN CONSTANTINVS P F AVG**; that of the Stanmore coin recurs, however, attached to another gold type (Cohen, No. 1). The reverse legend of No. 5 is **VICTORIA AVGGG**. Variety No. 6 gives **VICTORIA AAVGGG**. The mint-mark of the Stanmore piece is not recorded.

¹²³ *Num. Chron.*, xvii (1855), pp. 101 seqq., "On Roman Coins found near Coleraine" (from *Ulster Journal of Archaeology*, ii, pp. 182-92). A catalogue of the coins by James Carruthers is given, *op. cit.*, pp. 111 seqq. He there states that an inaccurate

"moory" earth in the town-land of Ballinrees, and from the fragments of silver vessels and other pieces of decorative plate contained in it seems to have represented the stock-in-trade of a silversmith. The find was entirely of silver, and the total weight about 203 oz. Troy. With the fragments of silver plate were 1,506 late Roman silver coins, together with uncoined silver in the shape of simple lumps and tongues of metal, and two parts of silver ingots like the preceding, stamped and inscribed. It is interesting as illustrating the impression made by their peculiar form that in the first popular account of the find in the *Coleraine Chronicle* they are described as "silver battle-axes".

The coins had suffered much from clipping, and were in many cases in whole or part indecipherable. Among those described are two siliquae of Constantine III (A.D. 407-11) and one of Honorius, said to bear a reverse, otherwise unknown, referring to his *Tricennalia*: "Wreath. **VOTIS XXX MVLTIS XXXX.**"¹³⁴

The *Tricennalia* of Honorius are recorded to have taken place at their proper date, in January, that is, 422.¹³⁵ The latest Vota hitherto described by any competent authority as existing on siliquae of Honorius are **VOT XV MVLT XX** which would date from A.D. 407, and it is impossible to accept this isolated

account of the find had previously appeared in the *Coleraine Chronicle*. It is, however, noteworthy that in this account the number of coins is given as 1,937, and the weight of the hoard 341 oz.

¹³⁴ J. Carruthers, *op. cit.*, p. 115. This reverse is not given by Cohen. No exergual inscription is given. It is possible that this exceptional coin was a double siliqua.

¹³⁵ *Marcellinus Comes, sub anno*; and see Clinton, *Fasti Romani*, i, p. 600, and *op. cit.* p. 528. The thirtieth year of Honorius began on Jan. 10, 422.

testimony of a not very accurate numismatic writer¹³⁶ as to the existence of this much later issue belonging to a time when the silver coinage of Honorius was otherwise non-existent. The statement seems to have been due to some confusion with a common siliqua type of Constantius II.

The coins of Constantine III here found, however, which refer to four Augusti, show that the Coleraine



FIG. 7. Half silver ingot, Coleraine Hoard.

hoard was buried in or after A.D. 408,¹³⁷ at precisely the same epoch, that is, as the Stanmore deposit described above.

Three silver half-ingots, two impressed with stamps, were found with the coins¹³⁸ and the other objects.

¹³⁶ Among the exergual inscriptions given in this account are "MOPS", constantly repeated, for MDPS and "PLVS" for PLVG.

¹³⁷ Both bore the reverse legend VICTORIA AAA GGGG. There was a Lyons piece with the exergual inscription LDPV. Cp. Cohen, viii, p. 199, No. 7, where, however, this exergual legend is not given.

¹³⁸ For the ingots see Willers, *Num. Zeitschr.*, xxx (1899), pp. 379, 380. They are now in the British Museum.

One of the stamped specimens (Fig. 7) bears half the original legend: **CVRMISSI**. The legend in its original form would have been

EX OFF //
CVRMISSI

Curmissus apparently represents a Celtic name form. The weight of this half-ingot is 153.114 grammes (2362.76 grains),¹³⁹ so that the original ingot would have weighed about 306 grammes (4730 grains), closely approaching that of the silver ingots from Dierstorf.



FIG. 8. Half silver ingot, Coleraine Hoard.

The other stamped half-ingot (Fig. 8) presents the complete inscription

EX OFPA
TRICI ♂

It has a large perforation, and one corner has been cut off since its discovery, so that it is considerably below its original weight. The present weight is 74.68 grammes.¹⁴⁰

¹³⁹ Length, 71 mm.; breadth, 58 to 77.5 mm.

¹⁴⁰ Length, 56 mm.; breadth, 31 to 58.5 mm.

It is certainly an interesting coincidence that this half-ingot, which must have reached Ireland about the time when St. Patrick was carried captive thither, should have the name of Patricius. St. Patrick himself, the son of a Decurion with the equally Roman name of Calpurnius, was born in Britain at Bannaventa, "near the Western Sea", according to his biography by Muirchu, written in the seventh century.¹⁴¹ It may well be therefore that he belonged to the same Western region which produced the silver ingots, and the date of his arrival in Ireland as a boy of sixteen, approximately placed by Professor Bury in A.D. 403-4,¹⁴² corresponds very nearly with that of the Coleraine hoard. The coincidence afforded by the name on the ingot corroborates the fact that the name of Patricius was one rife among the Romano-Britons at the beginning of the fifth century. It is by no means improbable, moreover, that the booty represented by the Coleraine hoard and the captivity of the boy Patrick were actually due to the same Irish raid, perhaps one of the latest enterprises of King Niall,¹⁴³ who perished in "the Sea of Wight" about A.D. 405.

The most recent find of this nature was made in 1900 during Prof. Garstang's excavations¹⁴⁴ around the great cruciform platform of concrete that occupies the centre of the Roman fort at Richborough (*Rutupiae*).

¹⁴¹ See especially Bury, *Life of St. Patrick*, pp. 23 seqq., 290 seqq., and, for Bannaventa, pp. 322 seqq.

¹⁴² *Op. cit.*, pp. 331 seqq.

¹⁴³ Bury, *op. cit.*, pp. 25, 26, connects St. Patrick's captivity with the last expedition of the Irish High-King who died about A.D. 405.

¹⁴⁴ J. Garstang, *Arch. Cantiana*, xxiv, p. 272.

The result of the discoveries was to show that this massive foundation, the purpose of which still remains enigmatic, was surrounded by what appears to have



FIG. 9. Silver ingot from Richborough.

been a corridor or cloister of marble. On the eastern border of this, three yards from the concrete mass, was found the silver ingot shown in Fig. 9.¹⁴⁵ It bears

¹⁴⁵ See Haverfield, *Addimenta ad C. I. L.*, vii, p. 640, and cp. his remarks, *Antiquary*, 1900, p. 335, and *Athenaeum*, Jan. 5, 1901, p. 26. The cast from which Fig. 9 is taken was due to the kindness of the Curator of the Canterbury Museum, where the ingot is now preserved.

the stamped inscription

EX OFFI
IZATIS

and the weight is exactly 11 oz. or 342.138 grammes.

Professor Haverfield¹⁴⁶ recalls a fourth-century personage whose name in the nominative case seems to have been *Isaac* and in the genitive *Isatis*. A Jew of that name therefore seems to have ranked among the *officinatores* privileged at this time by the Roman Treasury in Britain to stamp the ingots used as silver currency—a curious anticipation of the later connexion of men of his race with the Mint and Treasury of this country.

As in the case of the other silver ingots cited, we have here to do with a pound of silver.

Among the coins found during the same excavation were pieces of Honorius, and the very late maintenance of Roman dominion at Rutupiae is further illustrated by the discovery here of the coin of a second Carausius, described above.

With the exception of this remarkable piece, belonging perhaps to an usurper who held out awhile within the walls of Richborough at a time when the legions had left the greater part of Britain, and apparently of a few siliquae struck at Londinium under its old name by Constantine III, the Provincial mintage had altogether ceased since the time of Magnus Maximus. But the evidence before us shows that during this latest period of Roman rule in the island there continued to be a regular issue of stamped ingots under

¹⁴⁶ *Antiquary*, 1900, p. 335.

the control of the *Praepositus Thesaurorum Augustensium in Britanniiis*.

The whole ingots represented pound weights of silver, varying from a little over 300 grammes in the case of the Coleraine specimen, to about 323 in the case of that from the Tower. Their stamps, moreover, were so placed that a cut between the two lines of the official inscription would divide them into two halves, and the half-ingot seems to have had at least as large a circulation as the whole. The value of the pound of silver, as we have seen, was fixed at 5 solidi or 120 siliquae,¹⁴⁷ so that the half-ingots would have been worth $2\frac{1}{2}$ solidi or 60 siliquae. But payment at this time certainly went by weight and not by the nominal value as represented by the coinage, and it would have taken nearer 200 siliquae of the reduced Honorian weight to make the equivalent of a pound of silver.

ARTHUR EVANS.

¹⁴⁷ *Cod. Theod.*, xiii. 2. 1.

MISCELLANEA.

A COIN OF M. AEMILIUS LEPIDUS.

Mr. G. F. HILL in his work on *Historical Roman Coins* (p. 52) mentions a coin, struck about 65 B. C. by M. Aemilius Lepidus, which represents the equestrian statue, granted by the Senate, of one Aemilius Lepidus, who as a boy of fifteen slew an enemy in battle and saved the life of a Roman citizen. The story of the youthful hero is told by Valerius Maximus, who says (iii. 1. 1): *Aemilius Lepidus puer etiam tum progressus in aciem hostem interemit, civem servavit*. In accordance with this passage the inscription of the coin: **M. LEPIDUS AN. XV. PR. H. O. C. S.** has been resolved . . . an(norum) xv pr(ogressus) h(ostem) o(ccidit), c(ivem) s(ervavit). As regards the four last letters, this reading is evidently correct, but, as Mr. Hill points out, *progressus* used absolutely is hardly good Latin. A better suggestion is *pr(aetextatus)*, but then, as Mr. Hill observes, the standing of the lad has been already sufficiently indicated by **AN. XV.**

Although not myself a numismatist, I venture to subject to the judgement of experts a new suggestion: **PR. = proelio**. This resolution is supported by the wording of passages in ancient literature on the *corona civica*, e. g. Gell. v. 6. 11: *civica corona appellatur quam civis civi a quo in PROELIO servatus est, testis vitae salutisque dat*.

S. PANTZERHJELM THOMAS.

Christiania, Dec., 1915.

INDEX

A.

- Aemilius (M.) Lepidus, coin of, 520
ΑΚΕΣΙΟΣ, magistrate of Barea, 91, 94, 98
ΑΛΑΙ ---, magistrate of Barea, 91, 94
 Alexandre de Bruchsele, engraver, 133-135
 Ammon, on coins of Cyrene, 66, 68, &c.
ΑΜΦΙΛΟ, Chian magistrate, 412
ΑΜΦΙΜΗΔΗΣ, Chian magistrate, 406
 Arendius, coins of, from North Mendip hoard, 453
 Arcesilas IV. 74-75
ΑΡΙΣΤΑΓΟΡΑ(Σ), magistrate of Cyrene, 141
ΑΡΙΣΤΗΣ, Chian magistrate, 406
ΑΡΙΣΤΙΟΣ, magistrate of Cyrene, 141, 145
ΑΡΙΣΤΟΜΗΔΕΟΣ, magistrate of Cyrene, 96, 98
ΑΡΤΕΜΩΝ, Chian magistrate, 407
 Astārābād, coins of, 354
ΑΣΜΕΝΟΣ, Chian magistrate, 404, 412
ΑΘΗΝΑ(ΓΟΡΑΣ), Chian magistrate, 412
 Augusta—Londinium, 438, 478 ff.
 Augustus, Altar of Lyons, type of, 328

B.

- Bar currency of the Roman Empire, 488-519
 Barea, coins of, 70-71, 76-86, 88-96, 172-174
 Barea—Tencheira, coinage of, 76-80
ΒΑΣΙΛΕΙΔΗΣ, Chian magistrate, 406

Beaumont, Anglo-Saxon moneyer, 340-341

Bentley Priory, Roman ingot from, 511

ΒΟΙΞ ΚΟΥ, on a Croton coin, 189

Brabazon, William, treasurer of Irish army, 195-197

Brooke, G. C.:
 Irregular Coinages of the Reign of Stephen, 105-121

C.

- Calne, a mint of Matilda, 11, 120
 Carausius, coin of, struck on Philip I, 135-136; second emperor of that name, 506
 Catana, tetradrachm of, by Prokles, 357-360
ΧΑΙΡΕΦΩΝ, magistrate of Cyrene, 141, 147
ΧΑΙΡΙΟΣ, magistrate of Cyrene, 141
 Charles II, Pyx trials of, 346-348
 Chios, coins of, Period I, 625-647 n.c., 17-26; II, 575-541 n.c., 26-35; III, 545-500 n.c., 35-46; IV, 500-478 n.c., 46-52; V, 478-431 n.c., 364-371; VI, 431-412 n.c., 373-394; VII, 412-384 n.c., 394-432
 Cicero, *MONSIGNORE DE*:
 Notes sur un tétradrachme de Catana, &c., 357-360
 Clonminea, silver mines of, 218
 Coenwulf of Mercia, pennies of, 336
 Coleraine, Roman ingots from, 512-513
 Comes obrizicus, 491-492
 Constans, Constantine II, and Constantius Gallus, coins of, from North Mendips, 439-440
 Croton, later coins of, 179-191
 Croton and Sybaris, 190-191
 Cyprus, Alexandrine coin of, 294-322
 Cyrene, coinage of, 53-104, 137-

178, 249-293; first period, 54-65; second period, 65-86; third period, silver, 87-104, 159-172; gold, 136-159; fourth period; history, 249-254; silver, 254-264; gold, 264-267; bronze, 267-281; fifth period, 281-286; Ptolemaic coins of, 286-293.

D.

ΔΑΜΩ ΚΥΡΑΝΑΙΟΝ, inscription on coins of Cyrene, 162, 163, 167, 170, 172

ΔΑΜΩΝΑΚΤΟΣ, magistrate of Cyrene, 141

Dealla, Anglo-Saxon moneyer, 338

ΔΗΜΟΚΡΑΤΗΣ, Chian magistrate, 410

Diormod, Anglo-Saxon moneyer, 339

Dorsetshire, find of Anglo-Saxon coins, 334-344

Drake medal, technique of, 232, 242

Dublin mint instituted, 210-211

Dynyn, Anglo-Saxon moneyer, 339-340

E.

Egbeorht of Wessex, 357

Edward VI, Irish coinage of, 209-229

ΕΡΑΙΝΕ[ΤΟΣ], Chian magistrate, 408

Electrum coins of Chios, 11-13

ΕΟΥΝΟΜΟΣ, Chian magistrate, 406

ΕΡΜΑΡΧΟΣ, Chian magistrate, 405

ΕΡΜΟΦΑΝΤΟΣ, Chian magistrate, 407

Estrete, John, granted mastership of coinage in Ireland, 193

Euesperides, coins of, 71-76, 174-178

Eugenius, coins of, from North Mendips, 452

Evans, Sir Arthur —
Coinage and currency in Roman Britain, 423-519

ΗΓΗΣΙΠΡΟΣ, Chian magistrate, 413

ΗΡΑΓΟΡΗΣ, Chian magistrate, 407

ΗΡΙΔΑΝΟΣ, Chian magistrate, 410, 411, 413

G.

Galba, rare sestertii of, 333-335

Gazelle, type of Cyrene, 54-56

ΓΕΡΩΣ, Chian magistrate, 408

Gilān, coin of, 353

Gratian, coins of, from the North Mendips, 446-448

Gross, S. W. :—

Croton, 179-191

H.

Haromzek find of gold bars, 489

Helena N. F., 132-133

Henry of Anjou, coins of, 115-129; visits England, 117

Henry VIII, Irish coinage of, 192-209

Hermes on coins of Cyrene in allusion to marriage of Ophellas, 171

HILL, G. F. :—

The Technique of Simon van de Passe, 230-243

Honorius, coins of, from North Mendips, 452

Hydrax, no mint of, 73

I.

ΙΑΞΟΝΟΣ, magistrate of Cyrene, 141, 143, 147-149

ΙΚΕΣΙΟΣ, Chian magistrate, 415

Ingots, Roman, found in England, 508-519

ΙΠΡΙΑΣ, Chian magistrate, 408

ΙΠΡΙΗΣ, Chian magistrate, 407

Irān, coins of, 353-354

Ireland, coinages of Henry VIII and Edward VI for, 192-229

ΙΞΙΜΑ[ΧΟΣ], Chian magistrate, 408, 413

Ismail I of Persia, coins of, 245

ΙΣΤΙ[ΑΙΟΣ], Chian magistrate, 415

J.

James I, plaque of, 241-242

James II, pyx trials of, 350

Jovian, coins of, from the North Mendips, 443

Julian II, coins of, from the North Mendips, 440-443

K.

ΚΑΙΝΙΩΝ, magistrate of Barea, 91, 93

ΚΑΛΛΙΚΑΝΗΣ, Chian magistrate, 405

Karpathos, Cyrene coin attributed to, 61

Kasos, Cyrene coin attributed to, 61

ΚΗΦΙΣΟΚΡΙΤ[ΟΞ], Chian magistrate, 410, 411

Kition, Alexandrine coins of, 301-306

ΚΥΔΙΟΞΘ ---, magistrate of Cyrene, 141, 143, 152, 160

ΚΥΘ ---, magistrate of Cyrene, 141, 145

Kum, coins of, 353

ΚΥΧΑΙΡΙΟΞ, magistrate of Cyrene, 141, 143, 152

ΚΥΥΕΛΩ ΤΩ ΦΙΛΩ-Ν(ΟΞ), magistrate of Barce, 91, 93-94

L.

Lahijān, coins of, 355

Laus and Sybaris, 189

ΛΕΩΧΟΞ, Chian magistrate, 405

ΛΙΒΥΣΤΡΑΤΟΞ, magistrate of Cyrene, 102-103

Liu-Tzu, coins of, 121-131

Lion's head at Cyrene, 58-60

Lockett, R. C. :-

A Hoard of Nine Anglo-Saxon Pennies found in Dorsetshire, 336-344

London mint under Magnus Maximus, 428; revived by Valentinian I, 478-488

ΛΥΚΙΔΕΟΞ, Chian magistrate, probably misreading, 411

ΛΥΚΟΡ[ΜΑΞ], Chian magistrate, 413

Lyons, Altar of, 328

M.

Magnus Maximus, coins of, from North Mendips, 451-452

Marion, Alexandrine coins of, 320-322

Matilda, coins of, 113-115

Maurice, J., on Helena N.F., 132-133

ΜΑΥΡΟΓΟΡΔΑΤΟ, J. :-

A Chronological Arrangement of the Coins of Chios, 1-52, 361-432

Mendip hills, Roman silver coins from, 499 ff.

Minoan influence on Chios, 10

Minutuli argentei, 476-477

N.

Nāsr al-Dīn of Persia, coins of, 248, 351

Nero, unpublished sest., rev. Victory, 330-331; do., rev. Neptune, 329-333; medallion of port of Ostia, 329-330

NEWELL, E. T. :-
Some Cypriote "Alexanders", 294-323

ΝΙΚΙΞ, ΝΙΚΙΟΞ, magistrate of Cyrene, 96, 97

O.

Ola, Anglo-Saxon moneyer, 333

Ophellas, coins of Cyrene attributed to, 168-171

Ostia, medallion of Nero of, 329-330

P.

Palm-branch, mark of assayer on late Roman coins, 493

Paphos, Alexandrine coins of, 316-320

Passe, Simon van de, technique of, 230 ff.

PERERIC, inscription, 109-113

ΦΑΙΝ ---, magistrate of Barce, 91

ΦΑΝΚΛΗΟΞ, Chian magistrate, 409

ΦΕΙΔΩΝΟΞ, magistrate of Cyrene, 165

ΦΗΙΝΟΞ, Chian magistrate, 409

Philip III, Salamis coins in name of, 314

ΦΙΛΤΗΣ, Chian magistrate, 414

ΦΙΤΤΑΚ[ΟΞ], Chian magistrate, 414

ΦΟΙΝΙΞ, Chian magistrate, 407

Pirry, Martin, of Dublin mint, 215-217

Pityes find of Greek coins, 397-399

Plaques, engraved, production of, 232-237

ΠΟΛΙΑΝΘΕΥΞ, magistrate of Cyrene, 141, 155, 161

ΡΟΛΥΜΗ ---, Chian magistrate, 416

ΡΟΞΕΙΔΙΡΡΟΣ, Chian magistrate, 405

Procopius, coins of, from North Mendips, 446

Prokles, engraver at Catana, 357-360

PS, on late Roman coins = *pseudolum*, 497-498

Pyx trials of Commonwealth to James II, 345-350

R.

RAHINO, H. L. :—
Coins of the Shahs of Persia, 243-248, 351-356

RAMSDEN, H. A. :—
Coins of Lin-Tzu, 121-131

Rasht, coins of, 352-353

Richborough, Roman ingot from, 516-618

ROBINSON, E. S. G. :—
Questiones Cyrenalcae, 53-104, 137-178, 249-293

Roettler, John, technique of, 237

Rowlett and Bowes, commissioned to order coins for Ireland, 199

S.

Sakha hoard, 33

Salamia, Alexandrine coins of, 306-316

Selle vacante, Anglo-Saxon coins, 337

Silliquae of fourth century, 465 ff.

Simon van de Passe, technique of, 230-242; new plaque by, 220-232

ΣΚΥΜΝΟΣ, Chian magistrate, 411

S. M. L. A. P., London m. m. of Valentinian I, 483; of Gratian, 484

Stephen, irregular coinages of reign of, 105-121; from erased dies, 105-109; **PERERIC**, 109-113; Matilda, 113-115; Henry of Anjou, 115-121

ΣΩΣΤΡΑΤΟΣ, Chian magistrate, 409

Sweetheard, Anglo-Saxon moneyer, 339

Sybaris and Craton, 190-191

Sybaris and Laus, 189

SYMONS, HENRY :—

The Irish coinage of Henry VIII and Edward VI, 192-229

The Pyx Trials of the Commonwealth, Charles II and James II, 345-350

Alexandre de Bruchsell, 133-135

Syracuse, tetradrachm by Kimon, 357-360

T.

Tabaristan, coin of, 353

Tahmash I of Persia, coins of, 247

Taranto find, 64

Tehran, coin of, 355

Tenchira, coin of, 76-80

ΘΕΟΔΩΡΟΣ, Chian magistrate, 405

Theodosius, coins of, from North Mendips, 450-451

ΘΕΟΤΤΙΣ, Chian magistrate, 408

ΘΕΥΦΕΙΔΕΥΣ, magistrate of Cyrene, 141, 143, 154, 162-166

ΘΗΡΩΝ, Chian magistrate, 405

THOMAS, S. P. :—
A Coin of M. Aemilius Lepidus, 529

TIMAGORA - - -, magistrate of Barce, 175

TIMOL - - -, Chian magistrate, 416

Tower Hill, Roman ingots from, 507-511

V.

Valens, coins of, from North Mendips, 444-446

Valentinian I and London mint, 478-488; coins from North Mendips, 443-444

Valentinian II, coins from North Mendips, 448-449

Victor, coins of, from North Mendips, 452

Victory, type of Nero, 333

Vourla find, coins from, 39

W.

WALTERS, F. A. :—
Roman Unpublished Coins in my Collection, 323-335

A Coin of Carausius restruck on one of Philip Senior, 135

WEBB, P. H. :—
Helena N. F., 132-133

A Coin of Carausius restruck on Antoniniana of Philip I, 135-136

Wulfred of Canterbury, coins of, 337



Period I B.C. 625-575 (?)



Period II. B.C. 575 (?) - 545.

CHIOS. PERIODS I, II.

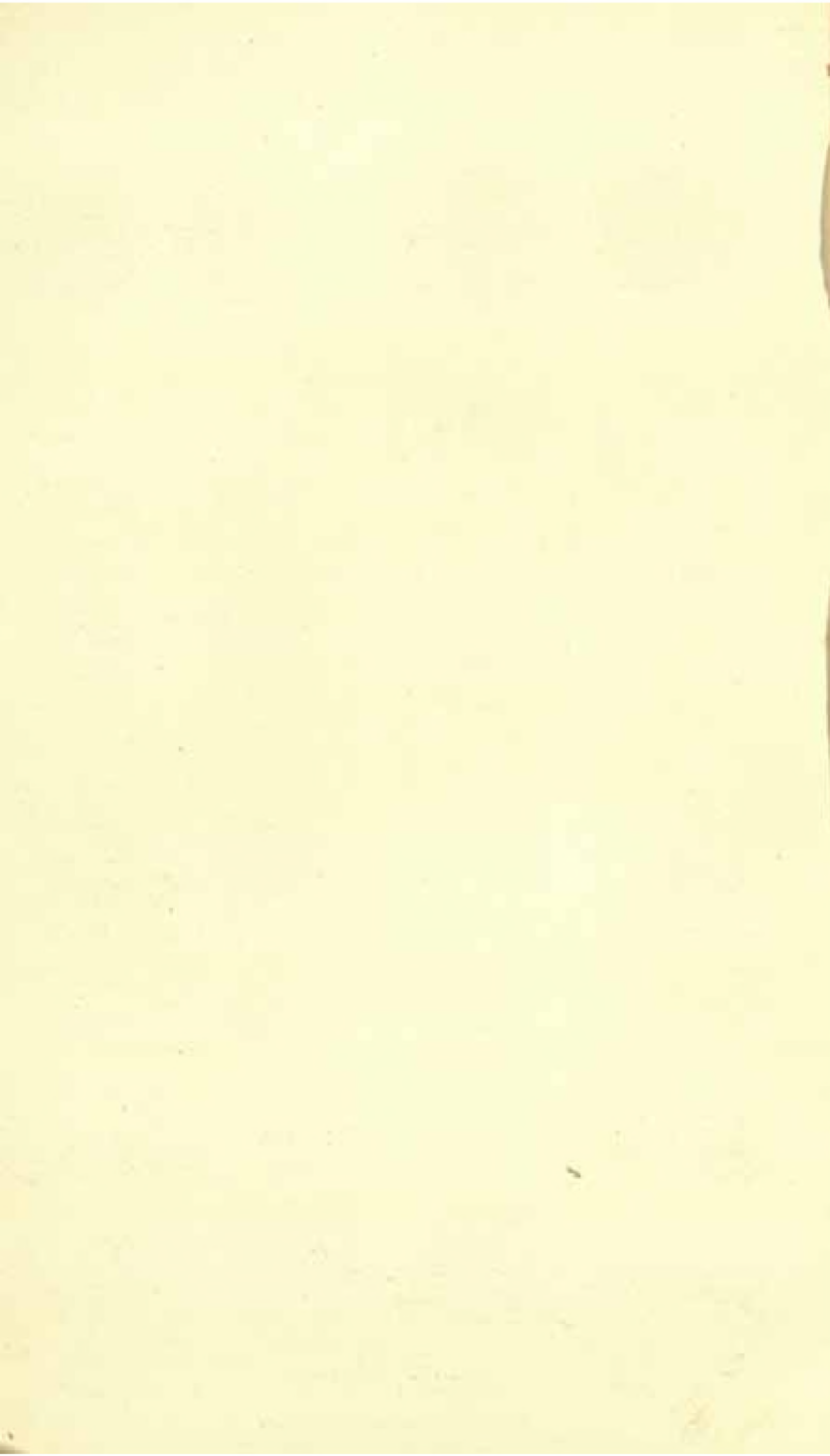




Period III. B.C. 545-500.



Period IV. B.C. 500-478.

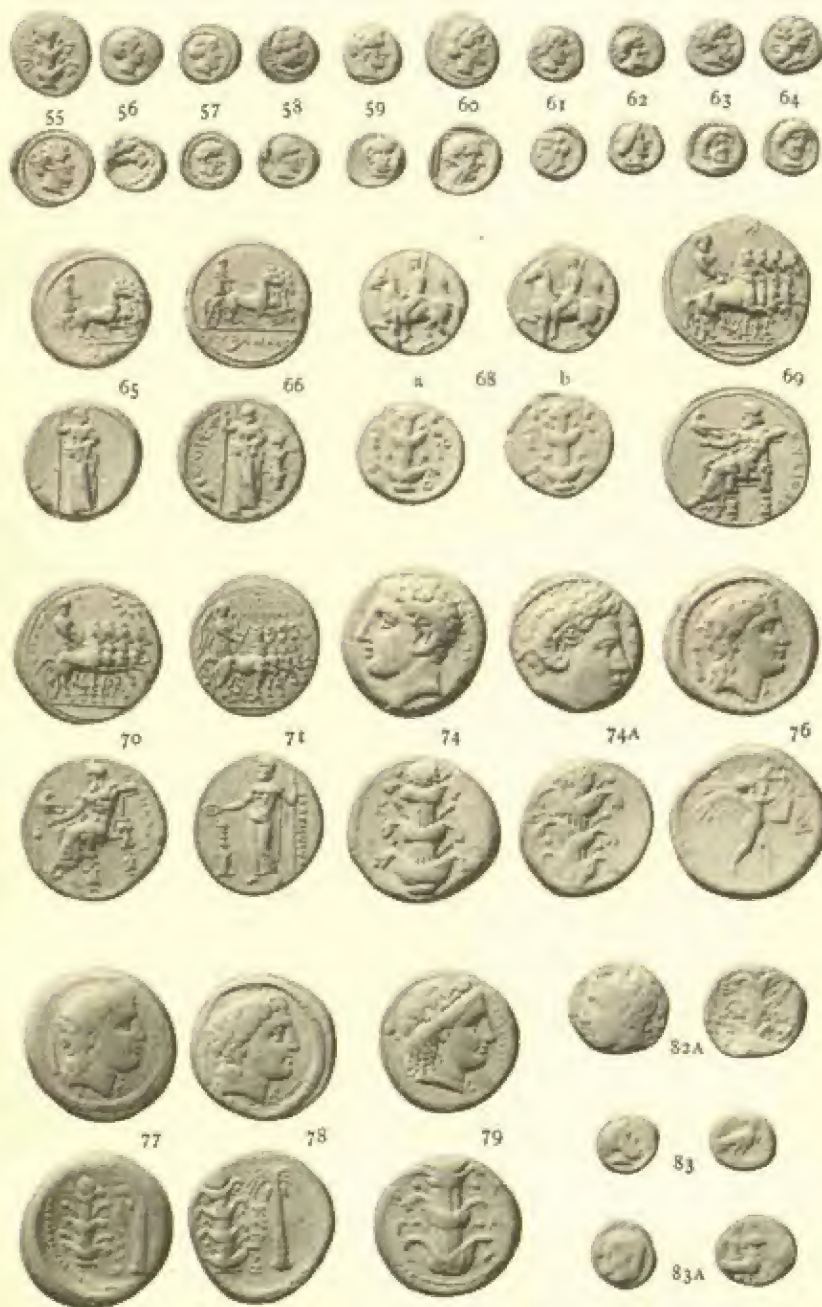




COINS OF CYRENAICA. PERIODS I, II.



COINS OF CYRENAICA. PERIOD III.



COINS OF CYRENAICA. PERIOD III.



COINS OF CYRENAICA. PERIODS IV, V.





IRREGULAR COINS OF THE REIGN OF STEPHEN.

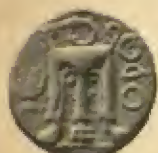


1

2

3

4



5



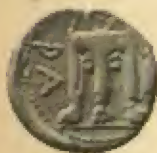
6



7



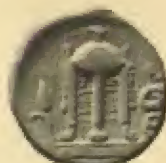
8



9



10



11



12



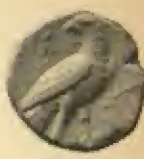
13



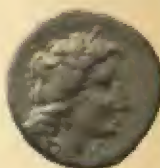
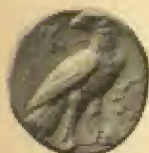
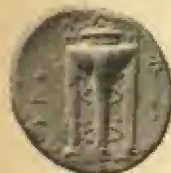
14



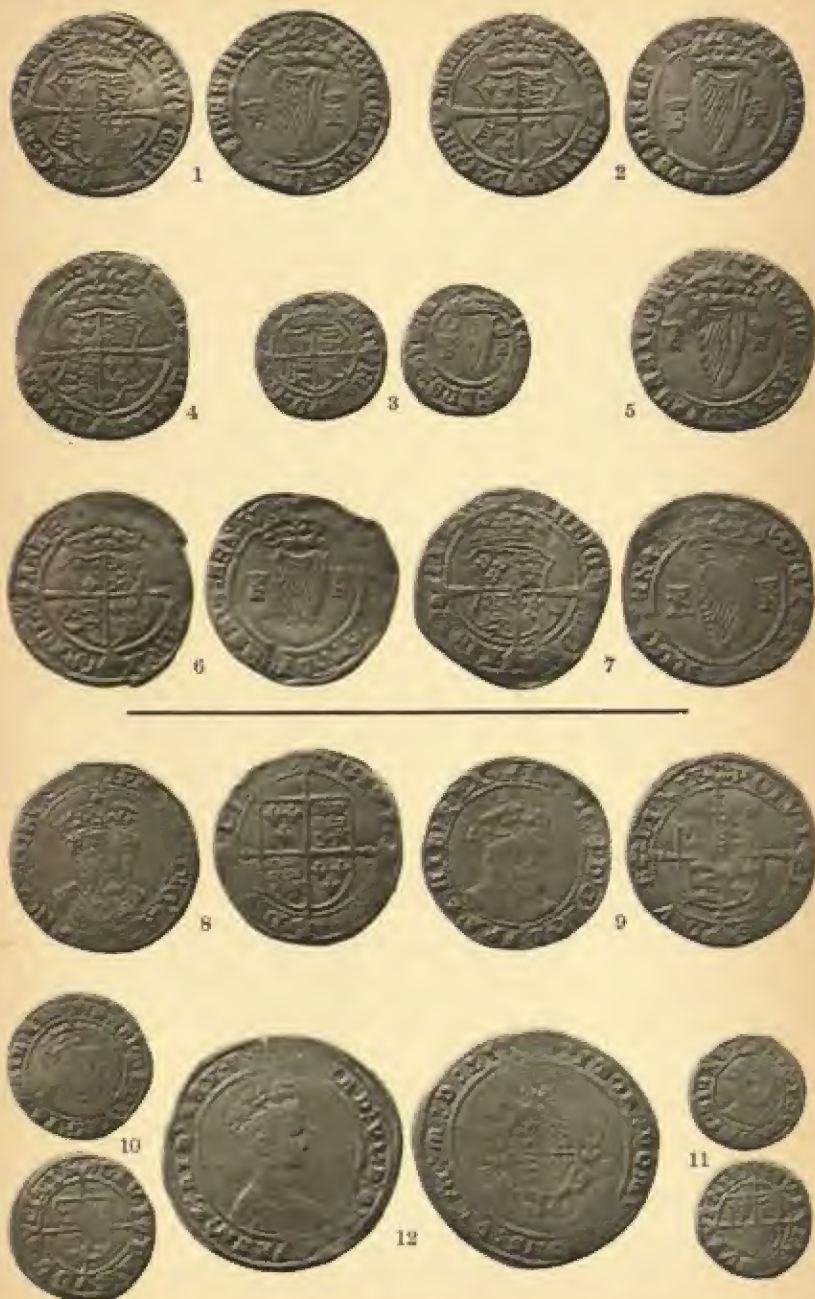
15



16







IRISH COINS OF HENRY VIII. AND EDWARD VI.



1



2

THE TECHNIQUE OF SIMON VAN DE PASSE.



24

THE TECHNIQUE OF
SIMON VAN DE PASSE.



1





CYPRIOTE ALEXANDERS. KITION 1-12.







CYPRIOTE ALEXANDERS. SALAMIS 1-6. PAPHOS 7-13. MARION 14.



1



2



1



3



3



4



4



5

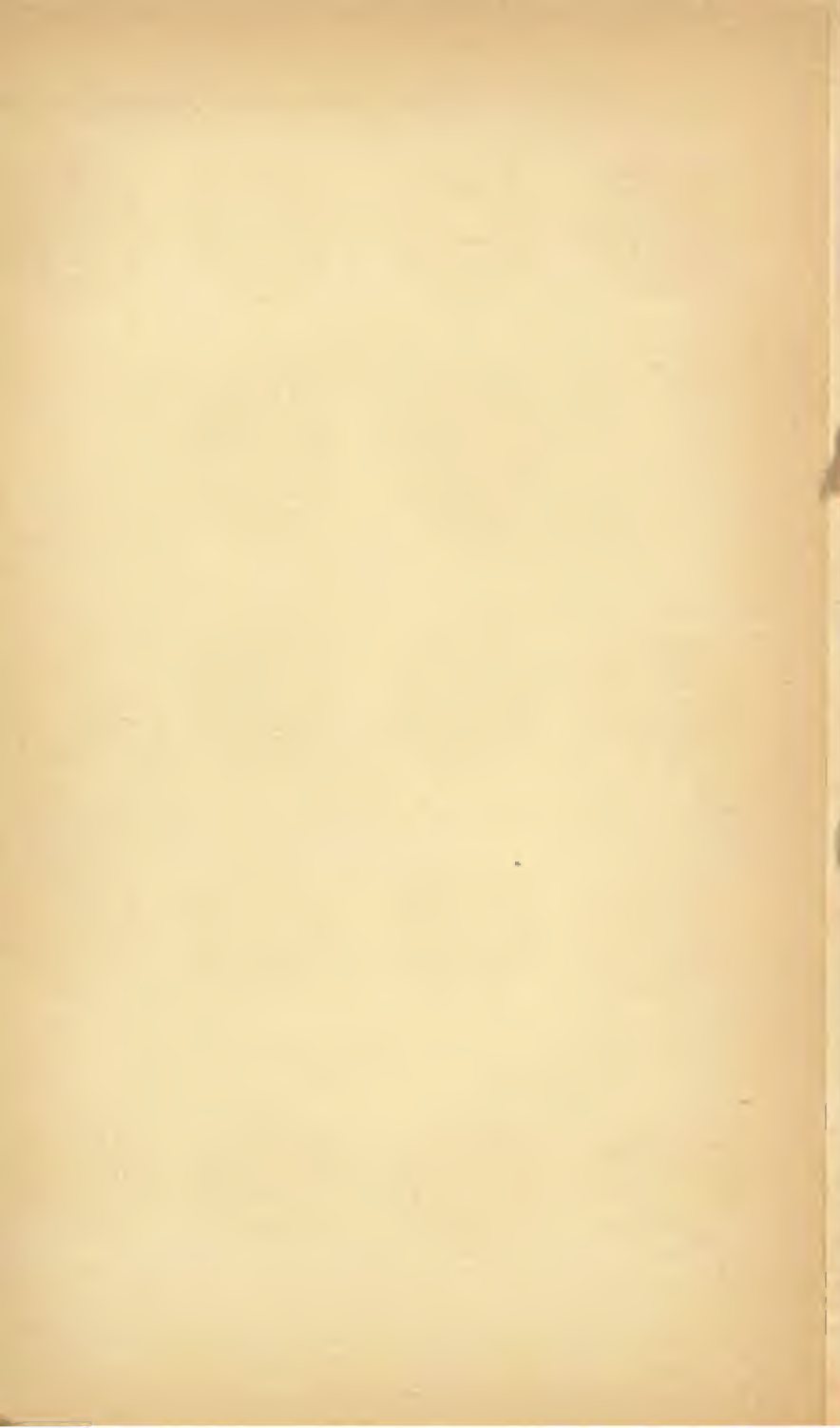


6



5

SOME RARE ROMAN COINS.





1



2



3



4



5



6



7

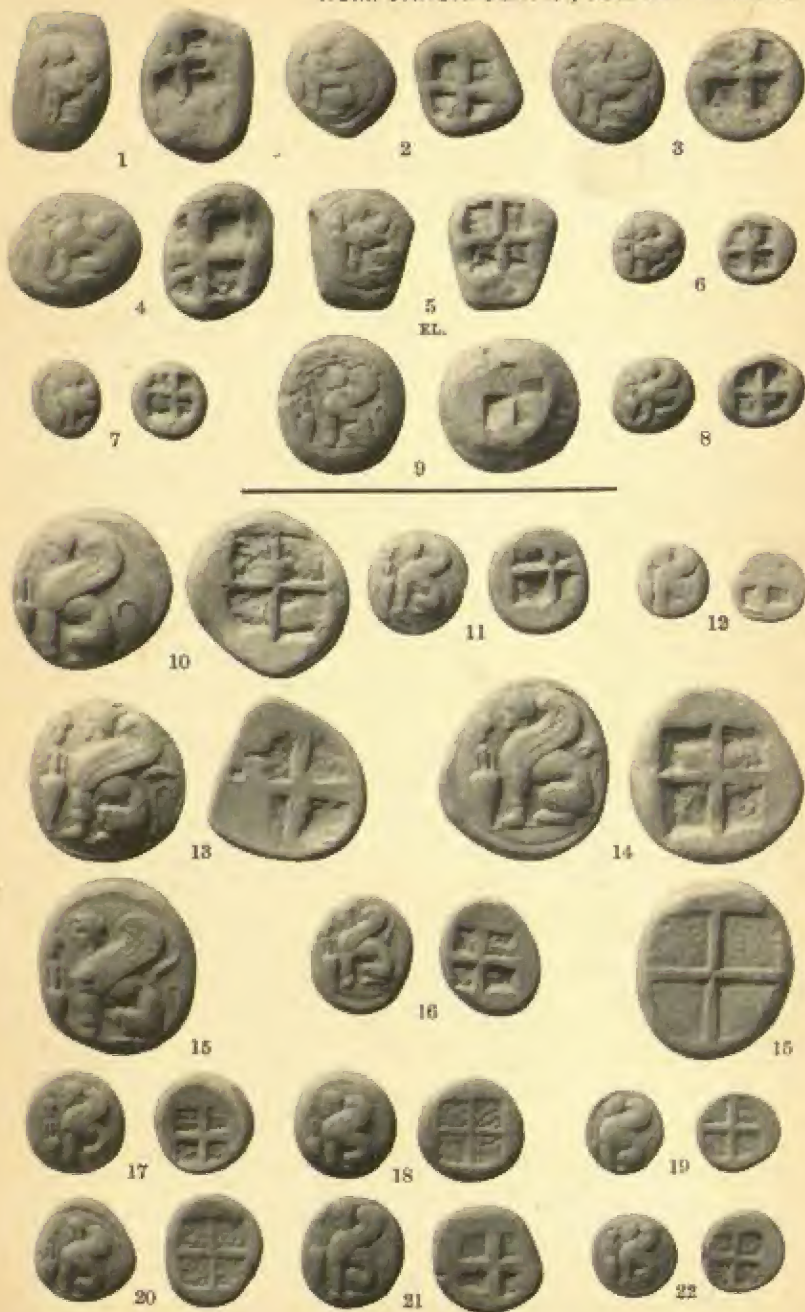


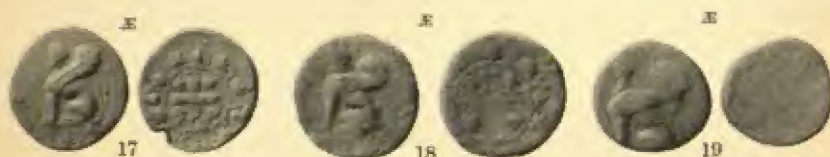
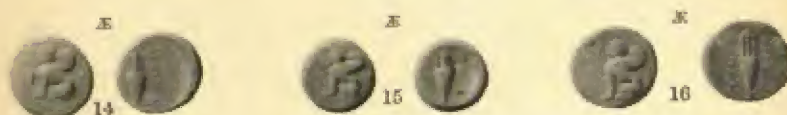
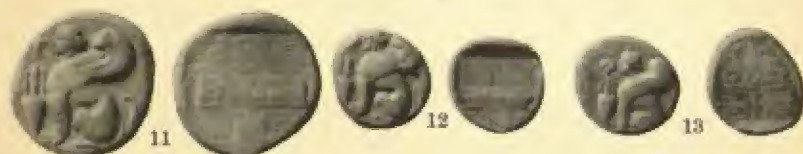
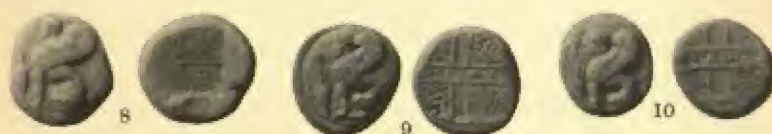
8



9









LIST OF FELLOWS
OF THE
ROYAL
NUMISMATIC SOCIETY
1915

PATRON
HIS MAJESTY THE KING

LIST OF FELLOWS
OF THE
ROYAL
NUMISMATIC SOCIETY
1915

*The sign * indicates that the Fellow has compounded for his annual contribution : † that the Fellow has died during the year.*

ELLECTED

- 1909 ADMIRAL H.S.H. PRINCE LOUIS OF BATTENBERG, P.C., G.C.B., G.C.V.O., K.C.M.G., A.D.C., F.R.G.S., Kent House, East Cowes, Isle of Wight.
- 1907 ALLAN, JOHN, Esq., M.A., M.R.A.S., British Museum, W.C., *Hon. Secretary.*
- 1907 ALLATINI, ROBERT, Esq., 18 Holland Park, W.
- 1892 AMEDROZ, HENRY F., Esq., M.R.A.S., 48 York Terrace, Regent's Park, N.W.
- 1884 ANDREWS, R. THORNTON, Esq., 25 Castle Street, Hertford.
- 1909 ARNOLD, EDWIN L., Esq., c/o "The Daily Telegraph," Fleet Street, E.C.
- 1882 BACKHOUSE, SIR JONATHAN E., BART., The Rookery, Middleton Tyas, R.S.O., Yorks.
- 1907 BAIRD, REV. ANDREW B., D.D., 247 Colony Street, Winnipeg, Canada.
- 1909 BALDWIN, MISS A., 404 West 116th Street, New York, U.S.A.
- 1902 BALDWIN, A. H., Esq., 4A Duncannon Street, Charing Cross, W.C.
- 1905 BALDWIN, PERCY J. D., Esq., 4A Duncannon Street, Charing Cross, W.C.
- 1898 BANES, ARTHUR ALEXANDER, Esq., The Red House, Upton, Essex.
- 1896 BEARMAN, THOS., Esq., Melbourne House, 8 Tudor Road, Hackney.

ELECTED

- 1906 BEATTY, W. GIDNEY, Esq., 265 Central Park West, New York, U.S.A.
- 1910 BENNET-POË, J. T., Esq., M.A., 29 Ashley Place, S.W.
- 1909 BIDDULPH, COLONEL J., Grey Court, Ham, Surrey.
- 1880 *BIEBER, G. W. EGMONT, Esq., 4 Fenchurch Avenue, E.C.
- 1885 BLACKETT, JOHN STEPHENS, Esq., C.E., Inverard, Aberfoyle, Perthshire.
- 1904 BLACKWOOD, CAPT. A. PRICE, 52 Queen's Gate Terrace, S.W.
- 1879 *BLUNDELL, J. H., Esq., 157 Cheapside, E.C.
- 1907 BOSANQUET, PROF. R. C., M.A., F.S.A., Institute of Archaeology, 40 Bedford Street N., Liverpool.
- 1896 BOULTON, SIR SAMUEL BAGSTER, BART., J.P., D.L., F.R.G.S., Copped Hall, Totteridge, Herts.
- 1903 BOUSFIELD, STANLEY, Esq., M.A., M.B. (Camb.), M.R.C.S., 35 Prince's Square, W.
- 1897 BOWCHER, FRANK, Esq., 35 Fairfax Road, Bedford Park, W.
- 1906 BOYD, ALFRED C., Esq., 7 Friday Street, E.C.
- 1899 BOYLE, COLONEL GERALD, 48 Queen's Gate Terrace, S.W.
- 1895 BRIGHTON PUBLIC LIBRARY, The Curator, Brighton.
- 1910 BRITTAN, FREDERICK J., Esq., 63 Bingham Road, Addiscombe, Croydon.
- 1908 BROOKE, GEORGE CYRIL, Esq., B.A., British Museum, W.C.
- 1905 BROOKE, JOSHUA WATTS, Esq., Rosslyn, Marlborough, Wilts.
- 1911 BROWNE, REV. PROF. HENRY J., M.A., 35 Lower Leeson Street, Dublin.
- 1896 BRUUN, HERR L. E., 101 Gothersgade, Copenhagen.
- 1878 BUCHAN, J. S., Esq., 17 Barrack Street, Dundee.
- 1881 BULL, REV. HERBERT A., M.A., J.P., Wellington House, Westgate-on-Sea.
- 1897 BURN, THE HON'BLE MR. RICHARD, I.C.S., M.R.A.S., c/o Messrs. Grindlay & Co., Bombay.
- 1881 BURSTAL, EDWARD K., Esq., M.Inst.C.E., 32 Cathcart Place, South Kensington, W.
- 1911 BURTON, FRANK E., Esq., J.P., South Manor, Ruddington, Notts.
- 1878 *BUTTERY, W., Esq. (address not known).
- 1904 CAHN, DR. JULIUS, Niedenu, 55, Frankfurt-am-Main, Germany.
- 1886 CALDECOTT, J. B., Esq., The Stock Exchange, E.C.
- 1908 CALLEJA SCHEMBRI, REV. CANON H., D.D., 50 Strada Saluto, Valletta, Malta.

ELECTED

- 1914 CAMERON, MAJOR J. S., Low Wood, Bethersden, Ashford, Kent.
- 1904 CAMPBELL, W. E. M., Esq., I.C.S., Mirzapur, United Provinces, India.
- 1894 CARLYON-BRITTON, P. W. P., Esq., D.L., J.P., F.S.A., 43 Bedford Square, W.C.
- 1905 CARTHEW, COLONEL R. J., J.P., Woodbridge Abbey, Suffolk.
- 1914 CICCIO, MONSIGNORE GIUSEPPE DE, 131 Via Stabile, Palermo, Sicily.
- 1891 *CLAUSON, ALBERT CHARLES, Esq., Hawkshead House, Hatfield, Herts.
- 1911 CLEMENTS, LUTHER, Esq., Charlton House, Peckham Rye, S.E.
- 1911 COATES, R. ASSHETON, Esq., 15 Onslow Crescent, S.W.
- 1913 *CODRINGTON, HUMPHREY W., Esq., B.A., M.R.A.S., Puttalam, Ceylon.
- 1886 CODRINGTON, OLIVER, Esq., M.D., F.S.A., M.R.A.S., 12 Victoria Road, Clapham Common, *Librarian*.
- 1895 COOPER, JOHN, Esq., Beckfoot, Longsight, Manchester.
- 1906 COSSINS, JETHRO A., Esq., Kingsdon, Forest Road, Moseley, Birmingham.
- 1902 COVERNTON, J. G., Esq., M.A., C.I.E., Director of Public Instruction, Rangoon, Burma.
- 1910 CREE, JAMES EDWARD, Esq., Tusculum, North Berwick.
- 1886 *CROMPTON-ROBERTS, CHAS. M., Esq., 52 Mount Street, W.
- 1914 CROWTHER-BEYNON, V. B., Esq., M.A., F.S.A., Westfield, Beckenham, Kent.
- 1914 DALTON, RICHARD, Esq., Park House, Cotham Park, Bristol.
- 1884 DAMES, M. LONGWORTH, Esq., I.C.S. (ret'd.), M.R.A.S., Crichmere, Edgeborough Road, Guildford.
- 1900 DATTARI, SIGNOR GIANNINO, Cairo, Egypt.
- 1902 DAVEY, EDWARD CHARLES, Esq. (address not known).
- 1886 *DEWICK, REV. E. S., M.A., F.S.A., 26 Oxford Square, Hyde Park, W.
- 1915 DILLON, SIR JOHN FOX, Bart., J.P., D.L., Lisnullen, Navan, Co. Meath.
- 1911 DRUCE, HUBERT A., Esq., 65 Cadogan Square, S.W.
- 1905 EGGER, HERR ARMIN, 7 Opernring, Vienna.
- 1907 ELDER, THOMAS L., Esq., 32 East Twenty-third Street, New York, U.S.A.
- 1893 ELLIOTT, E. A., Esq., 16 Belsize Grove, Hampstead, N.W.

ELECTED

- 1906 BEATTY, W. GEDNEY, Esq., 265 Central Park West, New York, U.S.A.
- 1910 BENNET-POË, J. T., Esq., M.A., 29 Ashley Place, S.W.
- 1909 BIDDULPH, COLONEL J., Grey Court, Ham, Surrey.
- 1880 *BIEBER, G. W. EGMONT, Esq., 4 Fenchurch Avenue, E.C.
- 1885 BLACKETT, JOHN STEPHENS, Esq., C.E., Inverard, Aberfoyle, Perthshire.
- 1904 BLACKWOOD, CAPT. A. PRICE, 52 Queen's Gate Terrace, S.W.
- 1879 *BLUNDELL, J. H., Esq., 157 Cheapside, E.C.
- 1907 BOSANQUET, PROF. R. C., M.A., F.S.A., Institute of Archaeology, 40 Bedford Street N., Liverpool.
- 1896 BOULTON, SIR SAMUEL BAGSTER, BART., J.P., D.L., F.R.G.S., Copped Hall, Totteridge, Herts.
- 1903 BOUSFIELD, STANLEY, Esq., M.A., M.B. (Camb.), M.R.C.S., 35 Prince's Square, W.
- 1897 BOWCHER, FRANK, Esq., 35 Fairfax Road, Bedford Park, W.
- 1906 BOYD, ALFRED C., Esq., 7 Friday Street, E.C.
- 1899 BOYLE, COLONEL GERALD, 48 Queen's Gate Terrace, S.W.
- 1895 BRIGHTON PUBLIC LIBRARY, The Curator, Brighton.
- 1910 BRITTAN, FREDERICK J., Esq., 63 Bingham Road, Addiscombe, Croydon.
- 1908 BROOKE, GEORGE CYRIL, Esq., B.A., British Museum, W.C.
- 1905 BROOKE, JOSHUA WATTS, Esq., Rosslyn, Marlborough, Wilts.
- 1911 BROWNE, REV. PROF. HENRY J., M.A., 35 Lower Leeson Street, Dublin.
- 1896 BRUUN, HERR L. E., 101 Gothersgade, Copenhagen.
- 1878 BUCHAN, J. S., Esq., 17 Barrack Street, Dundee.
- 1881 BULL, REV. HERBERT A., M.A., J.P., Wellington House, Westgate-on-Sea.
- 1897 BURN, THE HON'BLE MR. RICHARD, I.C.S., M.R.A.S., c/o Messrs. Grindlay & Co., Bombay.
- 1881 BURSTAL, EDWARD K., Esq., M.Inst.C.E., 32 Cathcart Place, South Kensington, W.
- 1911 BURTON, FRANK E., Esq., J.P., South Manor, Ruddington, Notts.
- 1878 *BUTTERY, W., Esq. (address not known).
- 1904 CAHN, DR. JULIUS, Niedenau, 55, Frankfurt-am-Main, Germany.
- 1886 CALDECOTT, J. B., Esq., The Stock Exchange, E.C.
- 1908 CALLEJA SCHEMBEL, REV. CANON H., D.D., 50 Strada Saluto, Valletta, Malta.

ELECTED

- 1914 CAMERON, MAJOR J. S., Low Wood, Bethersden, Ashford, Kent.
- 1904 CAMPBELL, W. E. M., Esq., I.C.S., Mirzapur, United Provinces, India.
- 1894 CARLYON-BRITTON, P. W. P., Esq., D.L., J.P., F.S.A., 43 Bedford Square, W.C.
- 1905 CARTHEW, COLONEL R. J., J.P., Woodbridge Abbey, Suffolk.
- 1914 CICCIO, MONSIGNORE GIUSEPPE DE, 131 Via Stabile, Palermo, Sicily.
- 1891 *CLAUSON, ALBERT CHARLES, Esq., Hawkshead House, Hatfield, Herts.
- 1911 CLEMENTS, LUTHER, Esq., Charlton House, Peckham Rye, S.E.
- 1911 COATES, R. ASSHETON, Esq., 15 Onslow Crescent, S.W.
- 1913 *CODRINGTON, HUMPHREY W., Esq., B.A., M.R.A.S., Puttalam, Ceylon.
- 1886 CODRINGTON, OLIVER, Esq., M.D., F.S.A., M.R.A.S., 12 Victoria Road, Clapham Common, *Librarian*.
- 1895 COOPER, JOHN, Esq., Beckfoot, Longsight, Manchester.
- 1906 COSSINS, JETHRO A., Esq., Kingsdon, Forest Road, Moseley, Birmingham.
- 1902 COVERNTON, J. G., Esq., M.A., C.I.E., Director of Public Instruction, Rangoon, Burma.
- 1910 CREE, JAMES EDWARD, Esq., Tusculum, North Berwick.
- 1886 *CROMPTON-ROBERTS, CHAS. M., Esq., 52 Mount Street, W.
- 1914 CROWTHER-BEYNON, V. B., Esq., M.A., F.S.A., Westfield, Beckenham, Kent.
- 1914 DALTON, RICHARD, Esq., Park House, Cotham Park, Bristol.
- 1884 DAMES, M. LONGWORTH, Esq., I.C.S. (retd.), M.R.A.S., Crichmere, Edgeborough Road, Guildford.
- 1900 DATTARI, SIGNOR GIANNINO, Cairo, Egypt.
- 1902 DAVEY, EDWARD CHARLES, Esq. (address not known).
- 1886 *DEWICK, REV. E. S., M.A., F.S.A., 26 Oxford Square, Hyde Park, W.
- 1915 DILLON, SIR JOHN FOX, Bart., J.P., D.L., Lismullen, Navan, Co. Meath.
- 1911 DRUCE, HUBERT A., Esq., 65 Cadogan Square, S.W.
- 1905 EGGER, HERR ARMIN, 7 Opernring, Vienna.
- 1907 ELDER, THOMAS L., Esq., 32 East Twenty-third Street, New York, U.S.A.
- 1893 ELLIOTT, E. A., Esq., 16 Belsize Grove, Hampstead, N.W.

ELECTED

- 1914 ELLIOT, SIR THOMAS H., K.C.B., Deputy Master, Royal Mint, E.C.
- 1904 ELLISON-MACARTNEY, RT. HON. WILLIAM GREY, P.C. Government House, Tasmania.
- 1895 ELY, TALFOURD, Esq., M.A., D.Litt., F.S.A., 92 Fitzjohn's Avenue, N.W.
- 1888 ENGEL, M. ARTHUR, 20 Route de Malagnou, Geneva.
- 1872 *EVANS, SIR ARTHUR J., P.S.A., M.A., D.Litt., LL.D., Ph.D., F.R.S., F.B.A., Corr. de l'Inst., Youlbury, near Oxford, *President*.
- 1892 *EVANS, LADY, M.A., c/o Union of London and Smith's Bank, Berkhamsted, Herts.
- 1904 *FARQUHAR, MISS HELEN, 11 Belgrave Square, S.W.
- 1886 FAY, DUDLEY B., Esq., 287 Beacon Street, Boston, Mass., U.S.A.
- 1902 FENTIMAN, HARRY, Esq., Murray House, Murray Road, Ealing Park, W.
- 1914 FIALA, K. u. K. Regierungsrat Eduard, Palais Cumberland, Vienna.
- 1910 FISHER LIBRARY, THE, University, Sydney, N.S.W.
- 1908 FITZWILLIAM MUSEUM, The Curator, Cambridge.
- 1901 FLETCHER, LIONEL LAWFORD, Esq., Norwood Lodge, Tupwood, Caterham.
- 1915 FLORENCE, R. Museo Archeologico of, Italy.
- 1898 FORRER, L., Esq., 11 Hammetton Road, Bromley, Kent.
- 1912 FORSTER, R. H., Esq., M.A., LL.B., F.S.A., 2 Enmore Road, Putney, S.W.
- 1894 *FOSTER, JOHN ARMSTRONG, Esq., F.Z.S., Chestwood, near Barnstaple.
- 1891 *FOX, H. B. EARLE, Esq., Woolhampton, Berks.
- 1868 †FRENTZEL, RUDOLPH, Esq., 46 Northfield Road, Stamford Hill, N.
- 1882 *FRESHFIELD, EDWIN, Esq., LL.D., F.S.A., New Bank Buildings, 31 Old Jewry, E.C.
- 1905 FREY, ALBERT R., Esq., New York Numismatic Club, P.O. Box 1875, New York City, U.S.A.
- 1896 *FRY, CLAUDE BASIL, Esq., Stoke Lodge, Stoke Bishop, Bristol.
- 1897 *GANS, LEOPOLD, Esq., 207 Maddison Street, Chicago, U.S.A.
- 1912 GANTZ, REV. W. L., Wallington Rectory, Baldock, Herts.

ELECTED

- 1871 GARDNER, PROF. PERCY, Litt.D., LL.D., F.S.A., F.B.A.,
12 Canterbury Road, Oxford.
- 1907 GARDNER, WILLOUGHBY, Esq., Deganwy, North Wales.
- 1889 GARSIDE, HENRY, Esq., 46 Queen's Road, Teddington, S.W.
- 1913 GILBERT, WILLIAM, Esq., 35 Broad Street Avenue, E.C.
- 1904 GOLDNEY, FRANCIS BENNETT, Esq., F.S.A., M.P., Abbots
Barton, Canterbury.
- 1894 GOODACRE, HUGH, Esq., Ullesthorpe Court, Lutterworth,
Leicestershire.
- 1907 GOUDY, HENRY, Esq., M.A., LL.D., D.C.L., Regius Professor
of Civil Law, All Souls College, Oxford.
- 1904 GRAHAM, T. HENRY BOILEAU, Esq., Edmund Castle,
Carlisle.
- 1905 GRANT DUFF, EVELYN, Esq., C.M.G., British Legation,
Berne.
- 1891 *GRANTLEY, LORD, F.S.A., Red Rice, Andover, Hants.
- 1865 GREENWELL, REV. CANON W., M.A., F.R.S., F.S.A., Durham.
- 1914 GROSE, S. W., Esq., Fitzwilliam Museum, Cambridge.
- 1871 GRUEBER, HERBERT A., Esq., F.S.A., Bembridge, Isle of
Wight.
- 1910 GUNN, WILLIAM, Esq., 10 Swan Road, Harrogate.
- 1899 HALL, HENRY PLATT, Esq., Toravon, Werneth, Oldham.
- 1898 HANDS, REV. ALFRED W., The Rectory, Nevendon, Wickford,
Essex.
- 1912 HARDING, NEWTON H., 110 Pine Avenue, Chicago, U.S.A.
- 1904 HARRIS, EDWARD BOSWORTH, Esq., 5 Sussex Place, Regent's
Park, N.W.
- 1904 HARRISON, FREDERICK A., Esq., Sunnyside, Fourth Avenue,
Frinton-on-Sea.
- 1903 HASLUCK, F. W., Esq., M.A., The Wilderness, Southgate, N.
- 1902 HAVERFIELD, PROF. FRANCIS J., M.A., LL.D., D.Litt., F.S.A.,
F.B.A., Winshields, Headington Hill, Oxford.
- 1914 HAYES, HERBERT E. E., Esq., Hythe Road, Greenhithe,
Kent.
- 1906 HEADLAM, REV. ARTHUR CAYLEY, M.A., D.D., Whorlton
Hall, Barnard Castle, Durham.
- 1901 †*HENDERSON, REV. COOPER K., M.A., Flat 4, 32 Emperor's
Gate, S.W.
- 1886 *HENDERSON, JAMES STEWART, Esq., F.R.G.S., M.R.S.L.,
M.C.P., 1 Pond Street, Hampstead, N.W.

ELECTED

- 1900 HEWLETT, LIONEL M., Esq., Greenbank, Harrow-on-the-Hill, Middlesex.
- 1903 HIGGINS, FRANK C., Esq., 5 West 108th Street, New York, U.S.A.
- 1893 HILBERS, THE VEN. G. C., M.A., V.D., St. Thomas's Rectory, Haverfordwest.
- 1898 HILL, CHARLES WILSON, Esq. (address not known).
- 1893 HILL, GEORGE FRANCIS, Esq., M.A., *Keeper of Coins*, British Museum, W.C.
- 1883 HOBART, R. H. SMITH, 619 Third Street, Brooklyn, New York, U.S.A.
- 1898 HOCKING, WILLIAM JOHN, Esq., Royal Mint, E.
- 1895 HODGE, THOMAS, Esq., 13 Wellington Street, Strand, W.C.
- 1875 HOUTUM-SCHINDLER, GENERAL SIR ALBERT, K.C.I.E., M.R.A.S., Petersfield, Farnstanton, Hunts.
- 1910 HOWORTH, DANIEL F., Esq., 24 Villiers Street, Ashton-under-Lyne.
- 1878 HOWORTH, SIR HENRY H., K.C.I.E., D.C.L., F.R.S., F.S.A., 45 Lexham Gardens, S.W., *Vice-President*.
- 1883 HUBBARD, WALTER R., Esq., 6 Broomhill Avenue, Partick, Glasgow.
- 1885 HÜGEL, BARON F. VON, 13 Vicarage Gate, Kensington, W.
- 1908 *HUNTINGTON, ARCHER M., Esq., Honorary President of the American Numismatic Society, Audubon Park, 156th Street, West of Broadway, New York, U.S.A.
- 1911 HYMAN, COLEMAN P., Esq., Royal Colonial Institute, Northumberland Avenue, W.C.
- 1879 +*JEX-BLAKE, THE VERY REV. T. W., D.D., F.S.A., 13 Ennismore Gardens, S.W.
- 1911 JOHNSTON, LEONARD P., Esq., The Cottage, Warningcamp, Arundel, Sussex.
- 1911 JONES, FREDERICK WILLIAM, Esq., 22 Ramahill Road, Scarborough.
- 1874 *KENYON, R. LLOYD, Esq., M.A., J.P., D.L., Pradoc, West Felton, Salop.
- 1914 KERR, ROBERT, Esq., M.A., Royal Scottish Museum, Edinburgh.
- 1876 KITCHENER, FIELD-MARSHAL EARL, OF KHARTOUM, K.G., K.P., G.C.B., O.M., G.C.S.I., G.C.M.G., G.C.I.E., P.C., c/o Messrs. Cox & Co., Charing Cross, S.W.

ELECTED

- 1901 KOZMINSKY, DR. ISIDORE, 20 Queen Street, Kew, near Melbourne, Victoria.
- 1883 *LAGERBERG, M. ADAM MAGNUS EMANUEL, Chamberlain of H.M. the King of Sweden, Director of the Numismatic Department, Museum, Gothenburg, and Rada, Sweden.
- 1910 LAUGHLIN, DR. W. A., M.A., Box 456, Virginia City, Nevada, U.S.A.
- 1898 LAVER, PHILIP G., Esq., M.R.C.S., 3 Church Street, Colchester.
- 1877 LAWRENCE, F. G., Esq., Birchfield, Mulgrave Road, Sutton, Surrey.
- 1885 *LAWRENCE, L. A., Esq., F.S.A., 44 Belsize Square, N.W., *Vice-President*.
- 1883 *LAWRENCE, RICHARD HOE, Esq., 15 Wall Street, New York, U.S.A.
- 1871 *LAWSON, ALFRED J., Esq., Smyrna.
- 1893 LESLIE-ELLIS, LIEUT.-COL. HENRY, D.L., J.P., F.S.A., F.R.G.S., Magherymore, Wicklow.
- 1900 LINCOLN, FREDERICK W., Esq., 69 New Oxford Street, W.C.
- 1907 LOCKETT, RICHARD CYRIL, Esq., F.S.A., Clonterbrook, St. Anne's Road, Aigburth, Liverpool.
- 1911 LONGMAN, W., Esq., 27 Norfolk Square, W.
- 1893 LUND, H. M., Esq., Waitara, Taranaki, New Zealand.
- 1903 LYDDON, FREDERICK STICKLAND, Esq., 5 Beaufort Road, Clifton, Bristol.
- 1885 *LYELL, ARTHUR HENRY, Esq., F.S.A., 9 Cranley Gardens, S.W.
- 1895 MACDONALD, GEORGE, Esq., C.B., M.A., LL.D., F.B.A., 17 Learmonth Gardens, Edinburgh.
- 1901 MACFADYEN, FRANK E., Esq., 11 Sanderson Road, Jesmond, Newcastle-on-Tyne.
- 1895 MARSH, WM. E., Esq., Rosendale, 35 Holligrave Road, Bromley, Kent.
- 1897 MASSY, COL. W. J., 30 Brandenburgh Road, Chiswick, W.
- 1912 MATTINGLY, HAROLD, Esq., M.A., British Museum, W.C.
- 1905 MAYROGORDATO, J., Esq., 6 Palmeira Court, Hove, Sussex.
- 1901 McDOWALL, REV. STEWART A., 5 Kingsgate Street, Winchester.
- 1905 McEWEN, HUGH DRUMMOND, Esq., F.S.A.(Scot.), Custom House, Leith, N.B.

ELECTED

- 1868 McLACHLAN, R. W., Esq., 310 Lansdowne Avenue, Westmount, Montreal, Canada.
- 1905 MESSENGER, LEOPOLD G. P., Esq., 151 Brecknock Road, Tufnell Park, N.
- 1905 MILLER, HENRY CLAY, Esq., 35 Broad Street, New York, U.S.A.
- 1897 MILNE, J. GRAFTON, Esq., M.A., Bankside, Goldhill, Farnham, Surrey, *Foreign Secretary*.
- 1910 MITCHELL LIBRARY, THE, Glasgow, F. T. Barrett, Esq., Librarian.
- 1898 *MONKTON, HORACE W., Esq., F.L.S., F.G.S., 3 Harcourt Buildings, Temple, E.C., and Whitecain, Wellington College Station, Berks.
- 1888 MONTAGUE, LIEUT.-COL. L.A.D., Esq., Penton, near Crediton, Devon.
- 1905 MOORE, WILLIAM HENRY, Esq. (address not known).
- 1879 MORRISON, LIEUT.-COL. H. WALTERS, R.A., F.S.A., 42 Beaufort Gardens, S.W.
- 1904 MOULD, RICHARD W., Esq., Newington Public Library, Walworth Road, S.E.
- 1900 *MYLNE, REV. ROBERT SCOTT, M.A., B.C.L., F.S.A., F.R.S.E., Great Amwell, Herts.
- 1909 NAGG, STEPHEN K., Esq., 1621 Master Street, Philadelphia, U.S.A.
- 1893 NAPIER, PROF. A. S., M.A., D.Litt., Ph.D., F.B.A., Headington Hill, Oxford.
- 1905 NATHAN, SIDNEY, Esq., M.D., 11 Bolton Gardens, S.W.
- 1910 NESMITH, THOMAS, Esq., c/o J. Munro & Co., 7 Rue Scribe, Paris.
- 1905 NEWALL, HUGH FRANK, Esq., M.A., D.Sc., F.R.S., Madingley Rise, Cambridge.
- 1906 NEWBERRY LIBRARY, Chicago, U.S.A.
- 1915 NEWCASTLE, THE LITERARY AND PHILOSOPHICAL SOCIETY OF, Newcastle-on-Tyne.
- 1905 *NEWELL, E. T., Esq., Box 321, Madison Square, New York, U.S.A.
- 1909 †NIKLEWICZ, H., Esq., 23 Park Place, Brooklyn, New York, U.S.A.
- 1904 NORFOLK, DUKE OF, E.M., K.G., P.C., Arundel Castle, Arundel.
- 1904 NORTHUMBERLAND, DUKE OF, K.G., P.C., LL.D., D.C.L., F.R.S., 2 Grosvenor Place, S.W.

ELECTED

- 1898 OGDEN, W. SHARP, Esq., F.S.A., Naseby, East End Road, Finchley, N.
- 1897 *O'HAGAN, HENRY OSBORNE, Esq., A 14 The Albany, Piccadilly, W.
- 1882 OMAN, PROF. C. W. C., M.A., LL.D., F.S.A., F.B.A., All Souls College, Oxford.
- 1911 OPPENHEIMER, HENRY, Esq., 9 Kensington Palace Gardens, W.
- 1908 PARSONS, H. ALEXANDER, Esq., "Shaftesbury," Devonshire Road, Honor Oak Park, S.E.
- 1882 *PECKOVER OF WISBECH, LORD, LL.D., F.S.A., F.L.S., F.R.G.S., J.P., Bank House, Wisbech.
- 1896 PEERS, C. R., Esq., M.A., F.S.A., 14 Lansdown Road, Wimbledon.
- 1915 PERKINS, CHARLES WILLIAM DYSON, Esq., J.P., F.S.A., F.R.A.S., F.Z.S., Davenham, Malvern.
- 1894 PERRY, HENRY, Esq., Middleton, Plaistow Lane, Bromley, Kent.
- 1862 *PERRY, MARTIN, Esq., M.D., Spalding, Lincolnshire.
- 1909 PETERSON, F. W. VOYSEY, Esq., B.C.S. (ret'd.), 28 Bassett Road, W.
- 1883 PINCHES, JOHN HARVEY, Esq., Whitehill Cottage, Meopham, Kent.
- 1910 PORTER, PROFESSOR HARVEY, 39 Court Street, Westfield, Mass., U.S.A.
- 1889 POWELL-COTTON, PERCY H. GORDON, Esq., Quex Park, Birchington, Thanet.
- 1915 POYSER, A. W., Esq., M.A., Grammar School, Wisbech.
- 1903 PRICE, HARRY, Esq., Arun Bank, Pulborough, Sussex.
- 1911 PRICHARD, A. H. COOPER, British School, Palazzo Odesscalchi, Rome.
- 1906 RADFORD, A. J. VOUGHT, Esq., F.S.A., Vacye, College Road, Malvern.
- 1913 RAO, K. ANANTASAMI, Curator of the Government Museum, Bangalore, India.
- 1890 RAPSON, PROF. E. J., M.A., M.R.A.S., 8 Mortimer Road, Cambridge.
- 1905 RASHLEIGH, EVELYN W., Stoketon, Saltash, Cornwall.
- 1915 RASQUIN, M. GEORGES, Tanglewood, Bushey Park, Herts.
- 1909 RAYMOND, WAYTE, Esq., South Norwalk, Connecticut, U.S.A.

ELECTED

- 1903 REGAN, W. H., Esq., 124 Queen's Road, Bayswater, W.
- 1876 *ROBERTSON, J. DRUMMOND, Esq., M.A., 17 St. George's Court, Gloucester Road, S.W.
- 1911 ROBINSON, E. S. G., Esq., B.A., British Museum, W.C.
- 1910 ROGERS, REV. EDGAR, M.A., 18 Colville Square, W.
- 1911 ROSENHEIM, MAURICE, Esq., 18 Belsize Park Gardens, N.W.
- 1903 RUBEN, PAUL, Esq., Ph.D., Alte Rabenstrasse, 8, Hamburg, Germany.
- 1904 RUSTAFFJELL, ROBERT DE, Esq., The Union Trust Co., Fifth Avenue, Sixtieth Street, New York, U.S.A.
- 1872 *SALAS, MIGUEL T., Esq., 247 Florida Street, Buenos Ayres.
- 1877 *SANDEMAN, LIEUT.-COL. JOHN GLAS, M.V.O., F.S.A., Whin-Hurst, Hayling Island, Havant, Hants.
- 1907 *SELTMAN, CHARLES T., Esq., Kinghoe, Berkhamsted, Herts.
- 1890 SELTMAN, E. J., Esq., Kinghoe, Berkhamsted, Herts.
- 1900 SHACKLES, GEORGE L., Esq., Wickersley, Brough, R.S.O., E. Yorks.
- 1908 SHEPHERD, EDWARD, Esq., 2 Cornwall Road, Westbourne Park, W.
- 1913 SHIRLEY-FOX, J. S., Esq., R.B.A., 5 Rossetti Studios, Flood Street, Chelsea, S.W.
- 1896 SIMPSON, C. E., Esq. (address not known).
- 1893 *SIMS, R. F. MANLEY, Esq. (address not known).
- 1896 SINHA, KUMVAR KUSHAL PAL, RAIS OF KOTLA, Kotla, Agra, India.
- 1912 SMITH, G. HAMILTON, Esq., Northside, Leigh Woods, Bristol.
- 1892 SMITH, VINCENT A., Esq., M.A., M.R.A.S., I.C.S. (retd.), 116 Banbury Road, Oxford.
- 1890 SMITH, W. BERESFORD, Esq., Kenmore, Vanbrugh Park Road West, Blackheath.
- 1905 SNELLING, EDWARD, Esq., 26 Silver Street, E.C.
- 1909 SOUTZO, M. MICHEL, 8 Strada Romana, Bucharest.
- 1894 SPINK, SAMUEL M., Esq., 17 Piccadilly, W.
- 1902 STAINER, CHARLES LEWIS, Esq., 10 South Parks Road, Oxford.
- 1878 STRACHAN-DAVIDSON, J. L., Esq., M.A., LL.D., Master of Balliol College, Oxford.
- 1869 *STREATFEILD, REV. GEORGE SYDNEY, Goddington Rectory, Bicester, Oxfordshire.

ELECTED

- 1914 *STREATFEILD, MRS. SYDNEY, 22 Park Street, Mayfair, W.
 1910 SUTCLIFFE, ROBERT, Esq., 21 Market Street, Burnley, Lancs.
 1914 SYDENHAM, REV. EDWARD A., The Vicarage, Wolvercote, Oxon.
 1885 SYMONDS, H., Esq., F.S.A., Union Club, Trafalgar Square, S.W.
 1896 *TAFES, H. W., Esq., 35 Greenholm Road, Eltham, S.E.
 1879 TALBOT, LIEUT.-COL. THE HON. MILO GEORGE, Hartham, Corsham, Wilts.
 1888 TATTON, THOS. E., Esq., Wythenshawe, Northenden, Cheshire.
 1892 *TAYLOR, R. WRIGHT, Esq., M.A., LL.B., F.S.A., 8 Stone Buildings, Lincoln's Inn, W.C.
 1887 THAIRLWALL, F. J., Esq., 12 Upper Park Road, Haverstock Hill, N.W.
 1890 THOMAS-STANFORD, CHARLES, Esq., M.P., M.A., F.S.A., Preston Manor, Brighton.
 1896 THOMPSON, SIR HERBERT, BART., 9 Kensington Park Gardens, W.
 1896 THORBURN, HENRY W., Esq., Cradock Villa, Bishop Auckland.
 1903 THORPE, GODFREY F., Esq., 21 Esplanade Mansions, Esplanade, Calcutta.
 1894 TRIGGS, A. B., Esq., Bank of New South Wales, Yass, New South Wales.
 1887 TROTTER, LIEUT.-COL. SIR HENRY, K.C.M.G., C.B., 18 Eaton Place, W.
 1912 VAN BUREN, DR. A. W., American Academy, Porta San Pancrazio, Rome.
 1899 VLASTO, MICHEL P., Esq., 12 Allée des Capucines, Marseilles, France.
 1892 VOST, LIEUT.-COL. W., I.M.S., Muttra, United Provinces, India.
 1905 WACE, A. J. B., Esq., M.A., Leslie Lodge, Hall Place, St. Albans.
 1883 WALKER, R. K., Esq., M.A., J.P., Watergate, Meath Road, Bray, Ireland.
 1897 WALTERS, FRED. A., Esq., F.S.A., 3 Adam Street, Adelphi, W.C., and Temple Ewell, Dover, *Hon. Secretary*.
 1911 WARRE, FELIX W., Esq., 231A St. James's Court, Buckingham Gate, S.W.

ELECTED

- 1901 *WATTERS, CHARLES A., Esq., 152 Princes Road, Liverpool.
- 1901 WEBB, PERCY H., Esq., 4 and 5 West Smithfield, E.C., *Hon. Treasurer.*
- 1885 *WEBER, F. PARKES, Esq., M.D., F.S.A., 13 Harley Street, W.
- 1883 *WEBER, SIR HERMANN, M.D., 10 Grosvenor Street, Grosvenor Square, W.
- 1884 WEBSTER, W. J., Esq., 76 Melford Road, Thornton Heath.
- 1904 WEIGHT, WILLIAM CHARLES, Esq., Erica, The Broadway, Letchworth.
- 1905 WEIGHTMAN, FLEET-SURGEON A. E., F.S.A., Junior United Service Club, Charles Street, St. James's, S.W.
- 1899 WELCH, FRANCIS BERTRAM, Esq., M.A., Wadham House, Arthog Road, Hale, Cheshire.
- 1915 WHITEHEAD, R. B., Esq., I.C.S., M.R.A.S., Amballa, Panjab, India.
- 1869 *WIGRAM, MRS. LEWIS, The Rookery, Frensham, Surrey.
- 1914 WILLIAMS, R. JAMES, Esq., Ascalon, 37 Hill Avenue, Worcester.
- 1908 WILLIAMS, T. HENRY, Esq., 85 Clarendon Road, Putney, S.W.
- 1910 WILLIAMS, W. I., Esq., Beech Villa, Nelson, Cardiff.
- 1881 WILLIAMSON, GEO. C., Esq., F.R.S.L., Burgh House, Wall Walk, Hampstead, N.W.
- 1906 WILLIAMSON, CAPT. W. H. (address not known).
- 1904 WINTER, CHARLES, Esq., Oldfield, Thetford Road, New Malden, Surrey.
- 1906 WOOD, HOWLAND, Esq., Curator of the American Numismatic Society, 156th Street, W. of Broadway, New York, U.S.A.
- 1903 WRIGHT, THE HON'BLE MR. H. NELSON, I.C.S., M.R.A.S., Bareilly, United Provinces, India.
- 1889 YEATES, F. WILLSON, Esq., 7 Leinster Gardens, Hyde Park, W.
- 1880 YOUNG, ARTHUR W., Esq., 12 Hyde Park Terrace, W.
- 1898 YOUNG, JAMES SHELTON, Esq., 19 Addison Gardens, W.
- 1900 ZIMMERMANN, REV. JEREMIAH, M.A., D.D., LL.D., 107 South Avenue, Syracuse, New York, U.S.A.
-

HONORARY FELLOWS

ELECTED

- 1898 HIS MAJESTY VICTOR EMMANUEL III, KING OF ITALY,
Palazzo Quirinale, Rome.
- 1891 BABELON, M. ERNEST, Membre de l'Institut, Bibliothèque
Nationale, Paris.
- 1903 BAHRFELDT, GENERAL-MAJOR M. VON, 9 Humboldtstr., Hildes-
heim, Germany.
- 1898 BLANCHET, M. J. ADRIEN, 10 Bd. Émile Augier, Paris.
- 1898 DRESSER, DR. H., Münzkabinett, Kaiser Friedrich Museum,
Berlin.
- 1899 GARRICI, PROF. DR. ETTORE, S. Giuseppe dei Nudi 75, Naples.
- 1893 GNECCHI, COMM. FRANCESCO, Via Filodrammatici 10, Milan.
- 1873 IMHOOF-BLUMER, DR. F., Winterthur, Switzerland.
- 1893 JONGHE, M. LE VICOMTE B. DE, Rue du Trône, 60, Brussels.
- 1878 KENNER, DR. F. VON, K. u. K. Museen, Vienna.
- 1904 KUBITSCHKE, PROF. J. W., Pichlergasse, 1, Vienna.
- 1893 LOEBBECKE, HERR A., Cellerstrasse, 1, Brunswick.
- 1904 MAURICE, M. JULES, 10 Rue Crevaux, Paris.
- 1899 PICK, DR. BEHRENDT, Münzkabinett, Gotha.
- 1895 REINACH, M. THÉODORE, 9 Rue Hamelin, Paris.
- 1891 SVORONOS, M. J. N., Conservateur du Cabinet des Médailles,
Athens.
-

MEDALLISTS

OF THE ROYAL NUMISMATIC SOCIETY

ELECTED

- 1883 CHARLES ROACH SMITH, Esq., F.S.A.
 1884 AQUILA SMITH, Esq., M.D., M.R.I.A.
 1885 EDWARD THOMAS, Esq., F.R.S.
 1886 MAJOR-GENERAL ALEXANDER CUNNINGHAM, C.S.I., C.I.E.
 1887 JOHN EVANS, Esq., D.C.L., LL.D., F.R.S., P.S.A.
 1888 DR. F. IMHOOF-BLUMER, Winterthur.
 1889 PROFESSOR PERCY GARDNER, Litt.D., F.S.A.
 1890 MONSIEUR J. P. SIX, Amsterdam.
 1891 DR. C. LUDWIG MÜLLER, Copenhagen.
 1892 PROFESSOR R. STUART POOLE, LL.D.
 1893 MONSIEUR W. H. WADDINGTON, Sénateur, Membre de
 l'Institut, Paris.
 1894 CHARLES FRANCIS KEARY, Esq., M.A., F.S.A.
 1895 PROFESSOR DR. THEODOR MOMMSEN, Berlin.
 1896 FREDERIC W. MADDEN, Esq., M.R.A.S.
 1897 DR. ALFRED VON SALLET, Berlin.
 1898 THE REV. CANON W. GREENWELL, M.A., F.R.S., F.S.A.
 1899 MONSIEUR ERNEST BABELON, Membre de l'Institut, Con-
 servateur des Médailles, Paris.
 1900 PROFESSOR STANLEY LANE-POOLE, M.A., Litt.D.
 1901 S. E. BARON WLADIMIR VON TIESENHAUSEN, St. Petersburg.
 1902 ARTHUR J. EVANS, Esq., M.A., F.R.S., F.S.A.
 1903 MONSIEUR GUSTAVE SCHLUMBERGER, Membre de l'Institut,
 Paris.
 1904 HIS MAJESTY VICTOR EMMANUEL III, KING OF ITALY.
 1905 SIR HERMANN WEBER, M.D.
 1906 COMM. FRANCESCO GNECCHI, Milan.
 1907 BARCLAY VINCENT HEAD, Esq., D.Litt., D.C.L., Ph.D., Corr.
 de l'Inst.
 1908 PROFESSOR DR. HEINRICH DRESSSEL, Berlin.
 1909 H. A. GRUEBER, Esq., F.S.A.
 1910 DR. FRIEDRICH EDLER VON KENNER, Vienna.
 1911 OLIVER CODRINGTON, Esq., M.D., M.R.A.S., F.S.A.
 1912 GENERAL-LEUTNANT MAX BAHRFELDT, Dr. Phil., Hildes-
 heim.
 1913 GEORGE MACDONALD, Esq., M.A., LL.D.
 1914 JEAN N. SVORONOS, Athens.
 1915 GEORGE FRANCIS HILL, Esq., M.A.

PROCEEDINGS
OF THE
ROYAL NUMISMATIC SOCIETY.

PROCEEDINGS OF THE ROYAL NUMISMATIC SOCIETY.

SESSION 1914—1915.

OCTOBER 15, 1914.

SIR ARTHUR EVANS, P.S.A., F.R.S., M.A., LL.D., D.Litt., &c.,
President, in the Chair.

The Minutes of the Ordinary Meeting of May 21 were read and approved.

Mr. H. E. E. Hayes and Monsignore Giuseppe de Ciccio were proposed for election as Fellows of the Society.

The following Presents to the Society were announced and laid upon the table, and thanks ordered to be sent to their donors.

1. Académie Royale de Belgique. Bulletins 2, 3, 4.
2. American Journal of Archaeology, 1914. Pt. 2.
3. American Journal of Numismatics, 1913.
4. Archaeologia Aeliana. Vol. xi.
5. Archaeologia Cantiana XXX.
6. Annual Report of the U.S. National Museum, 1912-1913.
7. Bulletins de la Société des Antiquaires de l'Ouest. Vol. iii, 1 and 2.

8. Canadian Antiquarian and Numismatic Journal. Vol. xi, 1, 2, and 3.

9. Journal of Hellenic Studies. Vol. xxxiv, Pt. 1.

10. Journal of the Royal Society of Antiquaries of Ireland. Vol. xlix, Pt. 2.

11. Monatsblatt der Numismatischen Gesellschaft in Wien. Nos. 370-1-2.

12. Numismatische Zeitschrift. Vol. vi, Pt. 4.

13. Proceedings of the Cambridge Antiquarian Society. No. lxxv.

14. Proceedings of the Royal Irish Academy. Vol. xxxii, Nos. 10-13.

15. Revue Numismatique, 1914. Pt. 2.

16. Revue Belge de Numismatique, 1914. Pt. 3.

17. Rivista Italiana di Numismatica, 1914. Pt. 2.

18. Suomen Museo, 1913.

19. Tidskrift Finska Fornminnesföreningens. Pt. xx.

20. Allan, J. Catalogue of Coins of the Gupta Dynasties in the British Museum; *from the Trustees of the British Museum.*

21. Baldwin, Miss Agnes. The Electrum Coinage of Lampsacus; *from the Author.*

22. Casagrandi, V. La Pistree sul tetradramma di Catana; *from the Author.*

23. De Jonghe, Vicomte. Deux Monnaies de Gronsveld; *from the Author.*

24. Milne, J. G. The Currency of Egypt under the Romans; *from the Author.*

25. Rabino, H. L. Quelques Pièces curieuses persanes; *from the Author.*

26. Rogers, Rev. E. A Handy Guide to Jewish Coins; *from the Author.*

27. Svoronos, J. N. The Double-headed Eagle of Byzantium (in Greek); *from the Author.*

Mr. F. A. Walters exhibited a denarius of Septimius

Severus (Cohen, No. 104) with rev. the Arch of Severus; Cos. III P. P.

Mr. G. F. Hill read a paper on "The Coins of Pisidian Antioch". Most of the coins described were discovered or acquired by Sir William M. Ramsay during his excavations on the site of Antioch in Pisidia, and from these Mr. Hill was able to give an account of the mint and to make corrections in coins previously attributed to other Antiochs. (This paper was printed in Vol. xiv, pp. 299-313.)

NOVEMBER 19, 1914.

SIR ARTHUR EVANS, P.S.A., F.R.S., &c., President, in the Chair.

The Minutes of the Meeting of October 15 were read and approved.

Mr. Herbert E. E. Hayes and Monsignore Giuseppe de Ciccio were elected Fellows of the Society.

The following Presents to the Society were announced and laid upon the table, and thanks ordered to be sent to their donors.

1. Aarbøger for Nordisk Oldkyndighed og Historie, 1913.
2. American Journal of Archaeology. Vol. xviii, No. 3.
3. Annual of the British School at Athens. No. xix.
4. Annual Report of the Deputy Master of the Mint, 1913.
5. Journal of the Royal Society of Antiquaries of Ireland. Vol. xlv, Pt. 3.

Mr. J. Mavrogordato read the first portion of his monograph on the "Coinage of Chios", in which he discussed the coinage of the archaic period. After a discussion of the origin of the sphinx type the reader proceeded to give the

results of his study of all available specimens of the early coinage and to propose a chronological arrangement. A discussion followed in which the President, Mr. Milne, and Mr. Earle-Fox took part. (This paper is printed in this volume, pp. 1-52.)

DECEMBER 17, 1914.

H. B. EARLE-FOX, Esq., Vice-President, in the Chair.

The Minutes of the Meeting of November 19 were read and approved.

The following Presents to the Society were announced and laid upon the table, and thanks ordered to be sent to their donors.

1. Beschreibung der griechischen Autonomen-Münzen der Akademie der Wissenschaften zu Amsterdam, 1912.

2. Canadian Antiquarian and Numismatic Journal. Vol. xi, No. 4.

3. Foreningen til Norske Fortidamindesmærkers Bevaring. Aarsberetning, 1913.

4. Macdonald, George. On Three Hoards of Coins discovered in the South of Scotland; *from the Author*.

5. Marshall, J. H. The Date of Kanishka; *from the Royal Asiatic Society*.

Mr. Percy H. Webb exhibited a third brass of Constantine, double struck, bearing the mint mark OF-I and an unpublished halfpenny token of THO. HUNTER AT YE ROSE TAVERN, a rose; IN LIME STREET, HIS HALF PENY.

Mr. L. A. Lawrence exhibited a fragment of a penny of Stephen, of Norwich, and another of Nottingham, both defaced on obverse with a cross, the latter of which he has since presented to the British Museum.

Mr. Henry Garside exhibited a bronze double of Guernsey of 1911 to show the alterations in the type.

Mr. G. C. Brooke read a paper on some of the irregular issues of the reign of Stephen; those with which he dealt were the countermarked coins supposed to have been issued by barons hostile to the king, the issue with the inscription **PERERIC** in place of the king's name and the coinages bearing the names of the Empress Matilda and Henry of Anjou. The attribution of the countermarked coins to barons hostile to Stephen was not satisfactory, for it supposed that a baron becoming possessed of the king's dies preferred, by countermarking them, to use them as a manifesto of his disregard of the king's claim rather than to his personal profit by striking from them coins which would pass unquestioned into currency. Perhaps a better view would be to compare the countermarking with the countermarking of dies which are kept at the present day, and to suppose that the countermarking was done by the king's moneyers at the time of a raid or siege in fear of their falling into the enemy's hands and that they were afterwards put to use, in spite of the countermarks, either by the moneyer, if he retained them, or by the enemy, if he succeeded in capturing them. Coins inscribed **PERERIC** had lately been attributed to Empress Matilda, but coins of this class were undoubtedly struck at Canterbury, a mint which was not in her hands; the wide issue of the coinage from various mints made it probable that it was an issue of the king's moneyers who might have thought fit to remain neutral in the difficult period of 1141 and for this purpose have put in place of the royal name an inscription which was then, as now, unintelligible. It would appear that the coinages of the Empress and her son formed a continuous currency of the Angevin party in England, the issues bearing the name of Henry being struck rather in his name than by him; finds and other considerations necessitated giving an earlier date than

the 1149 of Hoveden's chronicle to the so-called "Duke's money"; probably the Empress withdrew her name from the coinage in favour of her son's in the second half of 1142 when she abandoned her claim to the throne and put forward the claim of the young Henry. (This paper is printed in this volume, pp. 105-20.)

JANUARY 21, 1915.

SIR ARTHUR EVANS, P.S.A., F.R.S., &c., President, in
the Chair.

The Minutes of the Meeting of December 17 were read and approved.

M. Georges Rasquin was proposed for election as a Fellow of the Society.

The following Presents to the Society were announced and laid upon the table, and thanks ordered to be sent to their donors.

1. American Journal of Archaeology. Vol. viii, Pt. 4.
2. Fornvännan, Meddelanden från K. Vitterhets Historie och Antikvitets Akademien, 1913.
3. Rivista Italiana di Numismatica. Pts. 3 and 4, 1914.

Mr. Percy H. Webb exhibited a Belgian 20 franc note dated August 27, 1914, printed in Brussels from the old plates of Leopold I's notes, after the removal of the current plates to safety; this he has since presented to the British Museum.

Mr. Henry Symonds, F.S.A., showed a fine series of Anglo-Saxon and Norman coins of Ethelstan (Æthelwine of Shaftesbury), Edgar (Bruning of Norwich), Hardicanute (Godwine of Dorchester), Harold II (Dunning of Hastings), William I (Alnoth of Shaftesbury), and William II (Iegelric of Wareham).

Mr. L. A. Lawrence, F.S.A., exhibited a series of counters engraved in the manner of Simon de Passe with types representing London cries.

Miss Helen Farquhar exhibited a fine series of medals illustrating Mr. Hill's paper.

Mr. F. A. Walters, F.S.A., showed a first brass of Caracalla with *rev.* Circus Maximus, and a medal of Philip II of Spain by Poggini.

Mr. G. F. Hill read a paper on an unpublished silver plaque by Simon van de Passe, with the portrait and coat of arms of an unknown man, probably an Englishman. He took the opportunity of discussing the method used by Passe for making these plaques, showed the impossibility of the assumption that they were stamped from dies, and argued in favour of their being separately engraved. The differences in detail and in quality of engraving between different specimens of the same plaque (notably the bare-headed portrait of James I) were pointed out. (This paper is printed in this volume, pp. 230-42.)

FEBRUARY 18, 1915.

LT.-COL. H. WALTERS MORRISON, F.S.A., in the Chair.

The Minutes of the Meeting of January 21 were read and approved.

M. Georges Rasquin was elected a Fellow of the Society.

The following Presents to the Society were announced and laid upon the table, and thanks ordered to be sent to their donors.

1. British Numismatic Journal. Vol. ix; *presented by Miss Helen Farquhar.*

2. Journal international d'Archéologie numismatique. Vol. xvi, Pts. 1 and 2.

3. *Journal of Hellenic Studies*. Vol. xxxiv, Pt. 2.
4. *Journal of the Royal Society of Antiquaries of Ireland*. Vol. xliv, Pt. 4.
5. *Proceedings of the Royal Irish Academy*. Vol. xxxii, Nos. 14-16.
6. *Proceedings of the Society of Antiquaries of London*. Vol. xxvi.

Mr. Symonds exhibited a series of coins illustrating his paper and an original warrant (from the Library of the Society of Antiquaries) dated January 25, 1541-2, from the Privy Council to the master-workers at the Tower.

Colonel Morrieson showed a brass forgery of the base shilling of Edward VI and a groat of York of Henry VIII of the fifth bust, mm. boar's head, Lombardic letters in legend and roses in forks of the reverse.

Mr. Henry Symonds, F.S.A., read a paper on the Irish Coinages of Henry VIII and Edward VI, which presented difficulties similar to those attending a study of the English series in the same period, viz. the use by Edward VI of his father's portrait and titles. The lecturer was able to furnish evidence to prove that certain silver coins with the portrait of Henry VIII were in fact struck by Edward VI in various years, and to establish the Irish origin of a profile shilling dated 1552. Mr. Symonds showed that there were five coinages for Ireland by Henry VIII, all of which were struck in England, and three by Edward VI, which were made exclusively in Dublin. (This paper is printed in this volume, pp. 192-229.)

MARCH 18, 1915.

SIR ARTHUR EVANS, P.S.A., F.R.S., &c., President, in the
Chair.

The Minutes of the Meeting of February 18 were read and approved.

The following Presents to the Society were announced and laid upon the table, and thanks ordered to be sent to their donors.

1. Canadian Antiquarian and Numismatic Journal.
Vol. xii, Pt. 1.

2. Papers of the British School at Rome. Vol. vii.

3. Proceedings of the Cambridge Antiquarian Society.
No. lxxi.

4. Proceedings of the Society of Antiquaries of Scotland.
Vol. xlviii.

5. Revue Numismatique, 1914. Pts. 3-4.

Mr. F. A. Walters exhibited a series of overstruck coins of Carausius including one on an *antoninianus* of Philip I. (See this volume, p. 135.)

A paper by Mr. E. T. Newell on the Cypriote coins of Alexander types was read by Mr. G. F. Hill. After proving from the history of the island that while Phoenician mints were busily engaged in issuing such coins, it was improbable that those of Cyprus should be idle, it was shown that extensive series could be attributed to Kition and Salamis and smaller groups to Paphos and Marion. The paper was discussed by the President, Sir Henry Howorth, Mr. Hill, and Mr. Rogers.

APRIL 15, 1915.

SIR ARTHUR EVANS, P.S.A., F.R.S., &c., President, in the Chair.

The Minutes of the Meeting of March 18 were read and approved.

The following Presents to the Society were announced and laid upon the table, and thanks ordered to be sent to their donors.

1. Hill, G. F. The Development of Arabic Numerals in Europe; *from the Delegates of the Clarendon Press.*

2. Numismatic Circular. Vol. xxii, 1914; *from Messrs. Spink & Sons.*

3. Progress Report of the U.S. National Museum, for year ending June 31, 1914.

4. Suomen Museo Sakregister, 1894-1907.

5. Suomen Museo. No. xx, 1914.

6. Suomen Muinaismuistoyhdistyksen Aikakauskirja 11, 1876-85.

7. Urquhart, Jos., Life and Letters of W. H. Gillespie; *from the Trustees of Mrs. H. Gillespie.*

Professor Oman exhibited 12 silver medallions or double siliquae of Constantius II, Constantius Gallus, Valentinian I, Valens, Gratian and Valentinian II including 3 probably from a find made in Somersetshire in 1887, and 2 from the Groveley Wood find.

Mr. Sharp Ogden, F.S.A., showed 15 bronze coins of Constantine I to Magnus Maximus struck in London, in remarkably fine condition, from the Great Orme's Head find.

Mr. F. A. Walters, F.S.A., showed a bronze medallion of Crispina with remains of contemporary gilding. *Obr. CRISPINA AVGVSTA*, bust l. *R. CERES*. Ceres seated r. holding torch and ear of corn (Cohen, no. 2; Gneecchi, Plate CXI, n° 2);

The President exhibited a series of the silver coins from the find discussed in his paper and a solidus of Valentinian. R. **VICTORIA AVGG** of the London mint, with mm. **AVG OB**.

Sir Arthur Evans made a series of communications on the "Coinage and Silver currency in Roman Britain from Valentinian I to Constantine III". A great hoard consisting of 2,042 late Roman silver pieces found many years since in the North Mendips, which had passed into the late Sir John Evans's possession, was now for the first time described. Two siliquae from this hoard struck by Magnus Maximus at Londinium under its new name of "Augusta" were already known, but the hoard contained many other pieces of interest, including a series of so-called Silver Medallions shown to represent double-siliquae or $\frac{1}{8}$ pound silver. That the name "Miliarensia", though not strictly applicable, attached itself to these seems highly probable. The hoard also supplied new evidence as to a series of coins of small denomination struck from Gratian's time onwards representing half-siliquae.

A further communication for the first time called attention to some numismatic evidence indicating a revival of the London Mint (closed since 326 A.D.) by Valentinian I. Double-siliquae of this Emperor and his colleagues were cited bearing the exergual legend **S. M. L. A. P.** not found in any Continental mint. This was the epoch when the name of Augusta was supplanting that of Londinium; the proposed reading **S(aera) M(oneta) L(ondinii) A(ugustae) P(rima)** (sc. officina) reflected this transitional usage. The revival of the London Mint seems therefore to have been part of the great work of restoration effected in Britain by Valentinian's general Theodosius in 367. Its activity was specially connected with the "sportulary" issues at the time of the Quinquennial festivals.

In a concluding communication attention was called to

the important part played by stamped silver ingots of a pound in weight in the currency of Roman Britain at this period. Various kinds of these ingots in association with gold and silver were enumerated, and their issue was connected with the London Treasury (*Thesauri Augustensium*) mentioned in the *Notitia*. The possibility of Constantine III's having struck coins at London was also discussed. The frequency of the occurrence of great hoards of late Roman silver coins in the west of England and especially in the Mendip district was connected with the silver mining industry in that region. The silver seems to have been largely exported for the use of foreign mints, but coined silver was used for the payment of those engaged in the mining industry. It was a significant circumstance that the final detachment of Britain was followed by a practical cessation of the silver coinage of the Empire.

MAY 20, 1915.

SIR ARTHUR EVANS, P.S.A., F.R.S., &c., President, in
the Chair.

The Minutes of the Meeting of April 15 were read and approved.

The following Presents to the Society were announced, laid upon the table, and thanks ordered to be sent to their donors.

1. American Journal of Archaeology. Vol. xix, Pt. 1.
2. Fornvännen, Meddelanden från K. Vitterhets Historie och Antikvitets Akademien, 1914.
3. Journal of the Royal Society of Antiquaries of Ireland. Vol. xlv, Pt. 1.
4. Rivista Italiana di Numismatica, 1915, Pt. 1.

5. Rogers, Rev. Edgar. A Handy Guide to Jewish Coins ; *from Messrs. Spink & Sons.*

6. Select Italian Medals of the Renaissance in the British Museum ; *from The Trustees of the British Museum.*

7. Venn, Theodore J. Large U. S. Cents ; *from the Author.*

Rev. E. Rogers and Mr. Edward Shepherd were appointed to audit the Society's accounts for 1914-15.

Mr. Webb, on behalf of Mr. William Gunn, exhibited a third brass of Carausius, *Obv. IMP C CARAVSIVS PF AVG*, radiate, cuirassed bust, square to observer, head to r. *Rev. PAX AVG : S P MLXXI* Pax holding branch and sceptre. Found in York.

Mr. Henry Garside exhibited a proof in silver from dies for the bronze penny of 1860 with beaded circles on obverse and reverse.

Mr. Walters exhibited the coins discussed in his paper.

Mr. Walters, F.S.A., read a paper describing some rare and unpublished coins in his collection. The most remarkable of these were three unique coins of Nero ; a medallion or four-sestertius piece with reverse the harbour of Ostia ; a dupondius with *rev.* Neptune standing to l. S. C. in the field, and a very fine sestertius with *rev.* Victory to r. holding a palm-branch in her left hand and a figure of Rome in her right. The other coins described included, besides several rare coins of Augustus, a sestertius of Galba with *rev.* Galba in a quadriga on a triumphal arch, a type not yet satisfactorily explained but apparently commemorating the remission of tribute, and another with *rev.* Victory writing on a shield, and a bronze coin of Otho of Alexandria Mint with *rev.* head of Nike.

JUNE 17, 1915.

ANNUAL GENERAL MEETING.

SIR ARTHUR EVANS, P.S.A., F.R.S., &c., President, in
the Chair.

The Minutes of the Annual Meeting of June 18, 1914,
were read and approved.

Messrs. F. J. Brittan and Henry Garside were appointed
scrutineers of the Ballot for office-bearers for the ensuing
year.

The following Report of the Council was then read to the
meeting :

"The Council have again the honour to lay before you
their Annual Report as to the state of the Royal Numismatic
Society.

It is with deep regret that they have to announce the
deaths of the following Honorary Fellows :

Professor Luigi Adriano Milani.

Dr. Rudolf Weil.

and of the following eight Fellows :

M. Georges d'Alexéieff.

G. J. Crosbie Dawson, Esq., M.I.C.E., F.G.S.

Colonel W. F. Prideaux, C.S.I., F.R.G.S.

H. A. Ramsden, Esq.

W. Ransom, Esq., F.S.A., F.L.S.

Bernard Roth, Esq., F.S.A.

G. H. Vize, Esq.

T. B. Winser, Esq., F.R.G.S., F.I.A.

They have also to announce the resignations of the following
nine Fellows :

T. W. Barron, Esq.

G. T. Bascom, Esq.

M. C. Burkitt, Esq.

Charles J. P. Cave, Esq., M.A., F.S.A.

Alex. Goodall, Esq.

Professor W. Gowland, F.R.S., F.S.A.

O. C. Raphael, Esq.

Charles Sawyer, Esq.

W. B. Thorpe, Esq.

On the other hand they have much pleasure in announcing the election of the following three Fellows:

Monsignore Giuseppe de Ciccio.

H. E. E. Hayes, Esq.

M. Georges Rasquin.

and also of the Museo Archeologico, Florence.

The number of Fellows is therefore:

June.	Ordinary.	Honorary.	Total.
June, 1914	285	18	303
Since elected	4	—	4
	289	18	307
Deceased	8	2	10
Resigned	9	—	9
	272	16	288

The Council have also to announce that they have awarded the Society's Medal to Mr. George Francis Hill, Keeper of Coins in the British Museum, in recognition of his distinguished services to Greek and Roman Numismatics and to the study of the Medallie Art of the Renaissance."

The Hon. Treasurer's Report, which follows, was then presented to the Meeting:

STATEMENT OF RECEIPTS AND DISBURSE-

FROM JUNE, 1914,

Dr.

THE ROYAL NUMISMATIC SOCIETY IN ACCOUNT

	£	s.	d.	£	s.	d.
<i>To cost of Chronicle—</i>						
Printing	249	3	2			
Plates,	51	16	0			
Sundry illustrations	1	18	9			
				302	17	11
<i>To Books, &c.—</i>				6	3	6
<i>„ Lantern Expenses</i>				6	4	2
<i>„ Rent, &c.—</i>				41	14	0
<i>„ Sundry Payments</i>				8	15	9
<i>„ Balance carried forward—</i>						
General Account	178	12	11			
Research Fund	17	17	9			
				196	10	8
				£562	6	0

MENTS OF THE ROYAL NUMISMATIC SOCIETY,
TO JUNE, 1915.

WITH PERCY H. WEBB, HON. TREASURER.

£t.

By Balance brought forward—

	£	s.	d.	£	s.	d.
General Account	245	7	5			
Research Fund	16	1	6			

By Subscriptions—

189 Ordinary Subscriptions (less loss on foreign cheques, &c.)	198	8	7			
2 Entrance Fees	2	2	0			
				200	10	7
Sales of Chronicles				59	2	6
Dividends on Investments				34	15	4
Return of Income Tax				6	8	8

£562 6 0

Audited and found correct,

EDGAR ROGERS,
EDWARD SHEPHERD, } *Hon. Auditors.*

June 16, 1915.

The Reports of the Council and of the Treasurer were adopted on the motion of the President, seconded by Mr. A. A. Banes.

The President then presented the Society's Medal to Mr. G. F. Hill, and addressed him as follows :

MR. HILL.—It is with peculiar pleasure that I am able to hand to you to-day the Medal of this Society, which sees in you, as Keeper of the Medal Room, a worthy successor of our earlier medallists, Prof. Stuart Poole, Dr. Head, and Mr. Grueber, who occupied the same position. The distinction that you early gained in my own University you have maintained not only in the field of numismatics, but throughout a much wider range, embracing Classical Archaeology on one side, and on the other its Italian Renaissance. That you should receive to-day all that our Society has to offer, will be the more satisfactory to your friends, who have long waited in vain to see conferred on you those outward marks of recognition on the part of Academic bodies in this country which foreign arbiters have been less slow to offer.

To the Society itself you have done yeoman service not only as Editor, but in many capacities, and not only as the author of valuable papers, but as a contributor of many notes and reviews involving labours of a more altruistic nature. Your capacity for work, indeed, we all recognize as inexhaustible, and it has benefited not only ourselves, but the sister Society of Hellenic Studies, whose Journal you so ably edited for many years. In your own Department your labours have been specially fruitful, and five large volumes of the *Catalogue of Greek Coins* in the British Museum have been due to your combined industry and acumen.

The enterprise which has carried through the work in this particular series required quite exceptional qualities. It was only made possible by constant reference to the most recent results of geographical or archaeological exploration, and it

reveals at every turn a genuine philological instinct, and—one might almost say—a thirst for alphabets. In the first volume of the series, published in 1897, which deals with the Coins of Lycia, Pamphylia, and Pisidia—and hardly less in the second, dating from 1900, devoted to Lycaonia, Isauria, and Cilicia,—your researches continually led you beyond the pure Hellenic limits into curious borderlands occupied by members of the old Anatolian races and among records, the languages of which are still untranslated, and of which the characters are still in cases imperfectly deciphered. Your next volume on the Greek Coinage of Cyprus, which saw the light in 1904, involved you in the necessity of grappling with the pre-historic syllabary of that island. From the Semitic Coinage of Kition you passed by a natural transition to your next considerable undertaking, carried through in 1910, dealing with the issues of the Phoenician cities. The pendant to this in turn has been your recently issued *Catalogue of the Greek Coins of Palestine*. It is impossible here to enlarge on the complex and interesting problems on which it has been necessary for you to touch in the course of these latter volumes—problems which continually transcend merely numismatic limits. Here, again, many of the religious elements lie quite outside the classical borders, and not only include illustrations of Semitic Cult in its earlier aniconic as well as its most advanced phases, but in the case of Gaza, at least, lead us back to Philistine sanctuaries, and through them to the still earlier source in Minoan Crete. Some of these points have been further elaborated by you in a communication to the British Academy and in the notes to your translation of the *Life of Porphyry of Gaza*.

Your contributions to the *Numismatic Chronicle* cover the whole field of ancient numismatics. We have been indebted to you for a continuation of the valuable summaries of Greek Coins acquired for the National Collection, and for a description of a series of hoards of coins found in this country.

In that from Southants, cast British issues, pieces of novel and degenerate types, were associated with Roman coins dating down to Hadrian's time, which have a pathetic interest as the last forlorn successors of the gold coinage of the ancient Britons, surviving in that western district, in a baser metal and a degraded technique. Of considerable value have also been your accounts of the large finds of late Roman silver coins at Icklingham and Groveley Wood.

Nor have the services that you have rendered to ancient numismatics in this country been confined to the great work of publication carried out in your Department, and to your own additions to our knowledge. You have also done much to facilitate and popularize the study in the English speaking world both by your compendious *Handbook of Greek and Roman Coins* and in *Historical Coins*, both Greek and Roman, and your attractive work on the *Coins of Ancient Sicily*.

But the field of ancient Numismatics has by no means exhausted your activities. You have rightly recognized the great value of an intimate knowledge of the ancient models in estimating the work of the medallists of the Italian Renaissance. With this key to interpretation, and with this standard, both artistic and technical, for comparison, you have produced works on the medallie masterpieces of the great Revival in sympathy both with the underlying suggestions of their origin and with the new atmosphere in which they arose. For this latter faculty of understanding the more modern elements you had also sedulously prepared yourself by comprehensive studies of Italian Art in its larger manifestations of painting and sculpture. That you are as competent to deal with Italian Renaissance Art in its more general aspects as you are on its numismatic side was conclusively shown in the course of your useful activity as Secretary of the Vasari Society. In the case of Pisanello, indeed, to whom you have devoted a special monograph—as in that of other Italian Masters—the medallie work was

the production of a well-known artist whose paintings already adorned the walls of churches in his native city of Verona and in Ferrara, as well as those of the Doge's Palace at Venice. In your work *On the Portrait Medals of Italian Artists of the Renaissance*, published for the Medici Society in 1912, you have pursued, with great success, a special branch of the subject, and have made an exhaustive collection of the material both in private and public possession.

Your latest work, just issued from the Clarendon Press, on *The Development of Arabic Numerals in Europe*, is a model of scientific presentment and supplies a useful and much needed synopsis of the principal data relating to this interesting subject.

In conclusion, while handing you this small token of our high appreciation, I can only express a hope, in the name of our Society, that you may continue for many years yet to hold the Keepership of the Medal Room and to pursue your great illustrative work.

On receiving the Medal, Mr. Hill replied :

MR. PRESIDENT, MISS FARQUHAR AND GENTLEMEN,—In thanking the Society, and more especially you, Sir Arthur Evans, for your too flattering words, I must confess that when Mr. Allan first conveyed to me the news that the Council of the Royal Numismatic Society had done me the signal honour of awarding me the Medal for this year, my surprise and gratification were tempered with no small degree of confusion. In the list of your medallists are to be found the names of practically all the most distinguished numismatists of the last generation in Europe and in this country. Even for one whose modesty has become somewhat case-hardened by more than twenty years of service in a Government office, it is embarrassing to be introduced into such a company. Even if he accepts, as he is bound to accept, the verdict of the Council as to his

worthiness, he would like to be able to justify it to himself. This I have quite failed to do, except in so far as, by the mere accident of seniority, I happen to represent, however unworthily, the honourable traditions of the Department of Coins and Medals in the British Museum. It is of that Department then that I must speak. Its officials, doubtless, have been of all sorts. "There be of them that have left a name behind them, to declare their praises. And some there be, which have no memorial, who are perished as though they had not been, and are become as though they had not been born." But even those who are forgotten have probably left their mark, though its origin may be now unrecognized, on the body of tradition and on the accumulated mass of work which has been turned out by the Department since it was first organized. When I first entered the Museum, after a brief initiation into the mysteries of Greek numismatics by an old official of the Medal Room, Professor Percy Gardner, Stuart Poole had just retired, and Barclay Head had succeeded him as Keeper. It is perhaps difficult for one who has been closely associated with such an attractive personality as Head's to view his services to scholarship in true perspective; but I do not think I am exaggerating when I say that his work had something of the classic quality. By that I mean that as time goes on, although you may discover that he was mistaken in this or that detail, or even in something more than a detail, even in some view of considerable import, yet his method was so sound, his judgement so sane, and his thought so clear, that you learn more from his rare mistakes than from the uninspired accuracy of a hundred other men. It was a fine thing for any young man to start his official career under Head. It is possible that the inception of the Catalogue of Greek Coins was due to Poole; but it was the work of Head and Gardner that raised it to the position which it won at the very front of all undertakings connected

with Greek numismatics. That position is hardly yet challenged, in spite of the ambitious but somewhat unwieldily organized heavy artillery of the Berlin *Corpus*, or the brilliant individual "attack" of the French *Traité* or *Recueil*. Apart from the Catalogue, Head's *Historia*, the "Bible of the Medal Room" as we used to call it, had been in existence for some six years. Mr. Grueber had just finished the second volume of the *Anglo-Saxon Catalogue*, and was beginning to think of his *Handbook* and of his monumental *Roman Catalogue*. Mr. Wroth was at work on *Troas*—I can remember my pride when he asked and accepted my opinion about some small question of classification—and Mr. Rapson was daily sacrificing himself to the demands of countless students for information about Indian coins. Professor Gardner and Mr. Grueber and Professor Rapson are still happily with us; and Mr. Keary, whom I have not mentioned before because he had already retired before I came on the scene, has with fine public spirit returned to the Department as a voluntary assistant, after twenty-eight years of absence, to take the place of those who have gallantly offered their services to the Army. I may be permitted to recall the fact that the first of Mr. Keary's printed works with which I became acquainted was a certain paper of questions on which I was invited, as a candidate for the British Museum, to display my ignorance of the elements of numismatics. A foreign numismatist once described a volume of the *British Museum Catalogue* as more interesting than a novel; but I must confess to preferring Mr. Keary's novels to his numismatic examination papers.

By 1893, I suppose, the great days of the English school of Greek numismatics were over. The grand lines of classification had been laid down, the general principles of dating established. The work of the next twenty years has chiefly been to fill in details, although there are books

like Mr. Macdonald's *Coin-Types*, or articles like Professor Gardner's, which show that the wider issues are not being neglected by our own writers. There is another aspect of the study, the supreme illustration of which is Head's *Historia*, and that is the making of the stores collected by specialists accessible to archaeologists in general and, so to speak, peptonizing it for educational purposes. For it must not be forgotten that the *Historia*, useful and indispensable as it is to numismatists, is still more so to archaeologists in general. Believing that a gentle course of numismatics should be prescribed for all students of ancient history, I have made one or two modest attempts to present the material in an assimilable form. But I must admit that the royalties on the books in question furnish most discouraging proof of a contrary opinion on the part of our teachers at the Universities and elsewhere. More success, I trust, will attend the efforts of my colleagues, if, as I hope, they supplement their catalogues by books of this kind. There is, as reviewers say, a crying want for a book illustrating Indian history from the coinage; for a good general manual of the English coinage which will do something more than merely describe the chief varieties; and for a handbook of the coinage of Roman Britain. The Assistants with whom it is my privilege to work are as efficient, scholarly and energetic a body of men as the Medal Room has ever possessed, and I am sure this hint will not fall on barren soil. For my own part, my hands are full with a bulky work on Italian Medals, which has already occupied my leisure for some ten years, and is likely to last as long again. Even so, thanks to the storm which has shattered, for at least a generation to come, the international fabric of scholarship, it will emerge, if it survives at all, in a fragmentary condition. It is impossible, however, in the face of the present stress, to think seriously of such a subject as numismatics. I agree with a distinguished antiquary

who said the other day that he would willingly see all the remains of ancient and mediæval art go up in flames, if that would help to exterminate the plague that has come upon us. But such burnt-offerings, of which Belgium and France have seen all too many, do not avail to turn aside the wrath of the gods. Perhaps then those of us, who cannot for one reason or another offer the personal sacrifice which is alone effectual, are not doing wrong in maintaining a slight, if somewhat distracted, interest in antiquarian study. But you will not, I am sure, misunderstand me, or suppose that I undervalue the high honour which I have received at your hands, if I say that for most of us the only sort of medals that seem worth winning just now are war-medals.

The President then delivered the following address :

THE PRESIDENT'S ADDRESS.

Considering the stress of circumstances entailed by the greatest struggle in which the Nation has ever found itself engaged and the pre-occupation of the minds of all loyal citizens in these grave issues—at a time when our most active member is Lord Kitchener—it is something that our Society has not appreciably suffered. In spite of the fact that many of us—including your President—have had extra duties laid on them, we have been able to hold our regular Meetings and there has been no lack of material for our consideration. Such brief absorption in the history of the Past may indeed at times supply an anodyne against present anxieties and the losses that weigh upon so many hearts.

It is not surprising under the circumstances we have lost nine members by resignation.

Our financial position, as you have heard from the Report of our Honorary Treasurer, continues, nevertheless, not unsatisfactory, though there is a slight falling off in receipts owing to the War.

Our losses of ordinary members by death are eight in number. Of these, Mr. G. H. Vize, Mr. G. J. Crosbie Dawson, and Mr. T. Winser do not figure as contributors to the *Numismatic Chronicle*. Mr. W. Ransom, F.S.A., of Hitchin, was a well-known antiquary who had gathered together an interesting collection illustrating Roman London as well as his own district.

Among our Honorary Fellows we have to record the death of Professor L. A. Milani, director of the Archeological Museum at Florence, and of Dr. Rudolf Weil of Berlin.

Professor Milani cannot be judged by any ordinary archaeological or numismatic standards. His intense, not to say fiery, activity gave a noteworthy impulse to the advance of archaeological research in Italy, and in particular in his native Tuscany. His successful excavations at Vetulonia formed the prelude to his great work as the originator and organizer of the topographical Museum of Etruria and of the pre-Etruscan and pre-Hellenic section of the Florence Museum. In Numismatics he did much useful work in recording the contents of a series of great Italian finds, such as that of Spoleto, including *Æs rude*, *signatum* and *grave*, the Ripostiglio della Venera consisting of 30,000 pieces of the Third Century of our era, and also an account of other hoards of Republican and Imperial coins. His use of numismatic evidence was continual in all his varied archaeological works. It must indeed be said that his fervid zeal and lively imagination far outran his judicial faculties and, especially in later years, the substance of much of his work was clouded with fantastic theories. Such varied labours, however, cannot fail to produce some lasting results, and one at least of his earlier monographs—that on the origin of the Bust from the masked funeral urns of early Etruscan tombs—shows the insight of genius and is a model of archaeological method. Nor must it be forgotten that theories extravagant in themselves, have not infrequently

operated as a stimulating influence by the very reaction that they produce.

By the death of our Foreign Member, Dr. Rudolf Weil of Berlin, we have lost a friendly colleague whose authority—especially in the field of ancient numismatics—had secured general recognition. His scholarly mind had a wide range, and he had not only a special knowledge of his own subject but a minute acquaintance with certain periods of Greek history. He was also well versed in the Archaeology of Art.

From its inception in 1874 he was a constant contributor to the *Zeitschrift für Numismatik*, some of his papers being of exceptional importance. To him, for instance, is due the publication of two Imperial bronze types of Elis, one representing the Zeus of Phidias, the other, the Dionysos of Praxiteles, which illustrate in the highest degree the value of certain coin-types in relation to ancient sculpture.

His *Künstlerinschriften der sicilischen Münzen*,—the 44th *Programm zum Winkelmannsfeste*,—is marked by a fine and sympathetic touch and will remain a landmark in this interesting field of research. Some of his writings, such as his *Studien auf dem Gebiete des antiken Münzrechts*—a 'Festschrift' for the 50th Anniversary of the Numismatic Society of Berlin,—display a broad grasp of ancient numismatics, and in a paper in the *Z. f. N.* he discussed the influence of Roman on Mediaeval coin-types. In his notices of the work of his English colleagues Dr. Weil always showed himself courteous and appreciative, and the activity of the authorities of our Medal Room in issuing successive Catalogues received his warm commendation. One of his last numismatic works was a review of Mr. Hill's recently issued *Catalogue of the Greek Coins of Palestine* which he did not live to see through the press.

Colonel William Francis Prideaux, C.S.I., late of the Indian Staff Corps, died at his residence, Hopeville, Saint Peter's-in-Thanel, Kent, on Saturday, December 5th, 1914,

at the age of seventy-four years. He was born in London in 1840, and was educated at Aldenham School, Hertfordshire. From the first his energies were devoted to our Eastern Empire. He served in the India Office in 1859, joined the Bombay Infantry as an ensign the following year, and was promoted in 1862. He was assistant Political Resident at Aden in 1864, and was attached to the Bombay Staff Corps the following year. He took part in Mr. Rassam's Mission to King Theodore of Abyssinia in 1864, and from some time in 1866 till April, 1868, was kept in captivity at Magdala by order of the King.

Lieutenant Prideaux received the medal for the Abyssinian campaign and was made Political Agent at Zanzibar 1873. He was appointed Assistant Secretary to the Government of India in the Foreign Department in 1875, and filled the position till 1879. He was Political Agent at Bhopal in 1879-80. Subsequently he was Agent to the Governor-General with the ex-King of Oudh, and Superintendent of Political Pensions at Calcutta, and officiating Resident in the East Rajputana States in 1882-83. He was afterwards Resident at Jaipur, acting Resident in Kashmir, and Resident in Mewar, reaching the rank of Colonel in 1890. In 1893-94 Colonel Prideaux was acting Agent to the Governor-General in Rajputana, and in 1894-95 again Resident in Jaipur. He was nominated a Companion of the Star of India in January, 1895, reverted to the military department in April, 1895, and was placed on the unemployed supernumerary list in 1898. He was the author of *The Lay of the Himyarites*, an edition of the *Letters of S. T. Coleridge* and Bibliographies of the works of Robert Louis Stevenson, of Coleridge and E. Fitzgerald, and was a Fellow of the Royal Geographical Society. He had been a member of our Society since 1878.

To the *Numismatic Chronicle* for 1884 he contributed an important article on the coinage of Axum, previously quite unstudied; he also contributed a number of articles on the

numismatics, archaeology, and ancient history of South Arabia to the Journal of the Bombay Branch of the Royal Asiatic Society. He had a fine collection of Oriental coins, particularly of South Arabia, the greater part of which is now in the British Museum.

Mr. Bernard Roth, who died on the 26th March, had been a member of the R. N. S. since 1896 and a member of the Council from 1912-14, being Vice-President in 1913. He had a fine collection of English coins and was a frequent exhibitor at the Society's meetings. To the *Numismatic Chronicle* he contributed three articles, viz.:

A large Hoard of Coins of the Brigantes, 1908, pp. 17-55.

A Unique Gold Stater of the Brigantes, 1909, pp. 7-9.

A False Ancient British Coin, 1909, p. 430.

He was also an active member of the British Numismatic Society, being for some years a Vice-President. To the *British Numismatic Journal* he contributed the following articles:

Notes on three British Gold Coins recently found at Abingdon; I, 61-4.

A Remarkable Great of Henry VII; I, 137-8.

Finds of Chippings of Silver Coins; I, 149-62.

A Find of Ancient British Coins at South Ferriby; III, 1-16.

A Hoard of Gaulish Staters; IV, 221-3.

A Hoard of English Coins found in Switzerland; IV, 239-40.

The Coins of the Danish Kings of Ireland; VI, 55-146.

Ancient Gaulish Coins, including those of the Channel Islands; IX, 1-80.

Mr. H. A. Ramsden of Yokohama had been a Fellow of the Society since 1902. He was the greatest authority on the coins of the Far East, combining in a remarkable way the traditional knowledge of the East with the critical ability of the West. A sad interest attaches to the account of the coinage of Lin-Tzu from his pen, which appears in the present volume of the *Numismatic Chronicle*, from the

fact that he never lived to revise its proofs. This paper describes a series of Chinese coins earlier than any previously known. He founded the *Numismatic Journal* of Japan, a periodical devoted exclusively to the numismatics of the Far East, and was a regular contributor to English and American periodicals. He was the author of a series of monographs on coins of the Far East, such as the Amulets of Corea; Modern Chinese Copper Coins; Chinese Amulets; Early Chinese Barter Money; Shell-Currency; Siamese Porcelain Tokens; Chinese Paper Money; Japanese Kwan-Ei Sen.

It has been my agreeable duty this evening, to hand over our Medal, in the Society's name, to Mr. G. F. Hill, Keeper of the Department of Coins and Medals in the British Museum.

Greek numismatics, according to a good tradition, have been well represented among the communications made to the Society in the course of the past year. Mr. J. Mavrogordato has given us the first instalment of a successful attempt to classify the coins of Chios—whose recurring monetary type the Sphinx well symbolizes the enigmatic nature of some of the material. The monster itself, as he well points out, had made its way to the coinage of the Ionian Island from the Pangæan mainland of Thrace, where it was closely associated with Sun-worship. The religious sanction conveyed by its effigy goes back as we now know to the prehistoric period of Greece, but it is not for me here to open up a discussion on the original significance of this type and of the early fusion of Aegean and Egyptian elements that it embodies. I observe that the materials from the recent Vourla and Taranto finds have afforded new data for Mr. Mavrogordato in the course of his difficult inquiry.

In this connexion I may mention that our member, Miss Agnes Baldwin, following up her exhaustive monograph on

the electrum coinage of Lampsakos,¹ has communicated to the American Numismatic Society some parallel researches of great value on the electrum and silver coinage of Chios. From the evidence presented by a hoard of coins found at Pithyos in the island of Chios, she is able to demonstrate that the lower limit of the unbroken series of silver coins, which begins about 550 B.C., goes beyond the date 350, hitherto regarded as an approximate terminus, and must be advanced at least to 330 B.C.

Various problems in the very interesting field of Cyrenaic numismatics have been judiciously dealt with by Mr. E. S. G. Robinson. He brings out, in particular, new points as to Alliance coins—Cyrene—Euesperides, and Barce—Cyrene, and their connexion with the fortunes of King Arkesilas. The influence of the great Syracusan engravers of the close of the fifth century is no doubt rightly taken by Mr. Robinson as a chronological guide for the appearance of the series of coins of Cyrene with facing heads. It may be interesting to mention in connexion with the very ancient relations that existed between Cyrene and Crete, that fourth-century didrachms of Cyrene are of abundant occurrence on Cretan soil, and evidently, along with coins of Aegina, formed a regular part of the currency there. A very much earlier evidence of commercial intercourse indeed exists, if I am right in my identification of two ideographic signs of the Minoan series, with the silphium plant and its heart-shaped seed, much as it appears on the coins of Cyrene.² The survival of the same connexion of Cyrene and Crete in Roman times has been curiously illustrated by the recent Italian discovery of a series of monuments erected by the KOINON of the 'Province of Crete and Cyrene' at Gortyna, which was the residence of their common Governor.

New evidence of a very satisfactory kind was brought before the Society by Mr. E. T. Newell on the coins with

¹ *American Numismatic Society*, 1914. ² *Scripta Minoa*, pp. 215, 216.

Alexander types struck in Cyprus. He conclusively showed that a series of these coins was struck at Kition and Salamis and others at Paphos and Marion. Mr. Newell's paper, which is a model of numismatic method, involved the examination of thousands of specimens, including the great Damanhur hoard, and exhaustive references to all the chief cabinets, public and private.

The value of the record of local finds in fixing the attribution of the bronze coinages of the Greek cities has been greatly illustrated in recent years by the results obtained by British travellers and archaeological explorers in Asia Minor, and in particular by the researches of Sir William M. Ramsay and other members of the Asia Minor Exploration Fund. The finds on the site of the Sanctuary of Mên Askaenos, near the Pisidian Antioch, have thus enabled Mr. Hill to assert the claims of this city in several cases against its greater namesake and to assign to it with certainty a series of autonomous pieces. One of these types refers to the Fifth Legion, the veterans of which are commemorated on local tombstones.

It is a pleasure to me to refer on this occasion to the magnificent catalogue of the coins in the Panjab Museum at Lahore by Mr. R. B. Whitehead, recently published for the Panjab Government and issued at Oxford by the Clarendon Press. The first volume of this work, dealing with Indo-Greek coins, greatly supplements our knowledge of this interesting department of numismatics. It is modelled on Professor Gardner's *Catalogue of the Coins of the Greek and Scythic Kings of Bactria and India in the British Museum* published in 1886, but, during the generation that has since elapsed, the Museum of Lahore—largely owing to Mr. Whitehead's exertions and the liberal purchase by the Panjab Government of Mr. G. B. Bleazby's rich collection—has accumulated a mass of new and interesting materials. Among the fine coins of the Greek Kings of India are two

unique pieces of Polyxenos, a king whose existence is as yet only authenticated by these two pieces. It does not seem superfluous in this connexion to quote Mr. Whitehead's reminder that "it is a mistake to suppose that the Greek princes of the Panjab and the North West Frontier were the direct successors of Alexander the Great". Alexander, as a matter of fact, did not leave behind him any permanent settlements in India, and the second Greek invasion of India, which left enduring monuments, came—over a century after his death—from the Seleukid Province of Bactriana.

The second volume of the Lahore Catalogue deals with the coins of the Mughal Emperors, a subject to which Mr. Whitehead had already made many valuable contributions.

Mr. Walters has favoured us with a first communication describing rare and unpublished Roman coins in his collection. Among the most remarkable of these is a 'medallion' of Nero of the usual Ostia type but of the wholly unparalleled weight of four sesterces. Another unique piece of the same Emperor, a sestertius presenting on its reverse Victory holding a palm-branch and a figure of Roma, bears a bust of Nero crowned with a wreath of exceptional composition in which Mr. Hill recognizes the bay, olive, and pine, respectively representing the Delphian, Olympian, and Isthmian games.

In a paper on the portraits of Empresses of the Constantinian Age, Monsieur Jules Maurice replies to Mr. Percy Webb's objections to his attribution of the coins reading **HELENA N F** to a younger Helena, wife of Crispus. He cites Dr. Delbrueck's recent attribution of a bust in the Museo dei Conservatori at Rome to St. Helena as new evidence of her most characteristic coiffure with the broad woollen band—very different from the simple arrangement of the hair on coins bearing the legend **HELENA N F**. He shows that "there are three altogether characteristic types

of coiffure under the reign of Constantine, namely, that of St. Helena with a triple tier, that of Fausta with lesser and waved tresses forming a single mass and ending in a knot at the back of the neck, and that of the young Helena approaching that of Fausta but not presenting undulations and differing entirely by its simplicity from the headdress of St. Helena." Consistent suppression both by Constantine and Constantius II of all documents relating to the unfortunate Crispus sufficiently explains the fact that the name of the younger Helena coupled with that of Crispus is only mentioned in a single law of the Theodosian Code.

I have myself been able to lay before the Society an account of the largest of the series of hoards of Late Roman silver coins from the Mendip hills, and have illustrated its importance in relation to the silver-mining industry in that region, which in the later days of the Empire seems to have made Britain the principal source of the silver supply for the Roman mints of the West. I was also able to submit a group of double siliquæ of Valentinian I and his colleagues which may be taken to indicate a revival of the London mint by that Emperor on the occasion of the triumphal recovery of Britain by his great general Theodosius.

In the field of English numismatics our contributions have not been numerous. A valuable commentary on the irregular coinages of Stephen's time has, however, been supplied by Mr. G. C. Brooke. In the course of this he traverses Mr. Andrew's view that the curious inscription **PERERIC** or **PERERICM** that appears on a series of coins of this period should be regarded as a mutilated form of **IMPERATRICIS**. The occurrence of pennies with this inscription from the Kentish and other mints which do not seem to have ever been under the Empress's control seems, as Mr. Brooke points out, to be a fatal objection to this view. For the inscription itself he is unable

to offer any alternative explanation. He suggests, however, that "a parallel for this temporizing use of a meaningless inscription may be found in the Danish coinage of 1044-7, the period of the struggle of Magnus and Swein", and adds that "some coins of this period are figured and described by Hauberg (*Myntforhold og Udmyntninger i Danmark*, p. 49, and pl. viii, figs. 1-7) which bear the unintelligible name **IOANST** with the title **REX**".

Although it is with great diffidence that I myself venture on the field of English numismatics, I cannot help suggesting that the inscription **PERERIC**, though no doubt intentionally used for the deliberate purpose of non-committal, must have been based on some generally known legend. If not **IMPERATRICIS**, which seems too wide of the mark and for other reasons unacceptable, surely the obvious suggestion might be considered that it is founded on a slight variation of the **hENRIC** which forms part of the obverse legend on the coinage of Henry I? The parallel with the Danish piece reading **IOANST** is certainly of value. But here, too, it does not seem impossible to suggest an obvious original. On the same plate of Hauberg's work there is engraved a contemporary Danish imitation of a Byzantine type in which the first letters of the name clearly appear as **IO**. It seems probable, therefore, that the **IOAN** of the legend was suggested by some coin of a Byzantine Emperor, such as John Zimisces. The Byzantine influence on Denmark at this period is in fact illustrated by a series of types.

Our Medallist, Mr. Hill, in his investigations on the technique of Simon de Passe, has given conclusive reasons for believing that the plaques of this artist were in each case separately engraved, as suggested by Sir Sidney Colvin in his work on *Early Engravers and Engraving in England*. The repetitions of this design were in fact produced "not by any form of stamping but by the everyday method

of rubbing a paper impression from a first engraved plaque on to the face of a fresh one, and then following closely with a graver the lines so transferred". There can be little doubt that the silver map of Drake's voyages was transferred in a similar manner.

The victory of the Marne which has arrested the devastating progress of the New Barbarism recalls the world-famous defeat of Attila in the neighbouring Catalaunian Plain and lends a present appropriateness to the



FIG. 1.

recent identification of a type of Valentinian III by our Honorary Fellow, Monsieur Babelon. He shows that the reverse type of the Emperor holding the Cross and trampling on the head of a human-headed serpent (Fig. 1) appears first on the imperial dies about 451, the date of Aetius's victory. It is also seen, moreover, on a solidus struck at Ravenna in the name of the Eastern Emperor Marcian in 452, when he sent a considerable army to assist his colleague to protect Italy against the advance of Attila on that side. M. Babelon therefore concludes that this addition of a human head to the earlier type of the serpent trampled under foot may have a direct reference to the Hunnish king.

Attention may here be called to a small exhibition

organized by Mr. Hill in the Coin Department of the British Museum, illustrating the relation—not always a very creditable one—of the mediaeval “Esterlings” of what is now Belgium to the English pennies, and giving examples of coins and medals belonging to that part of the Low Countries down to Napoleon’s time. Among the interesting medals here exhibited are specimens referring to the Govern-



FIG. 2.

ment of the Duke of Alva, to the Siege of Brussels by the Spaniards in 1579, of Tournai in 1581, of Ypres in 1583, and of Antwerp by Alessandro Farnese in 1585. Two medals record the victory of Prince Maurice over the Spaniards at Turnhout in 1597, and of the same in association with Sir Francis de Vere over Albert of Austria at Nieuport in 1600. But the piece which has the most direct pertinence to current events is that of which an illustration is given in Fig. 2, commemorating, in a singular manner, the oppression of the Netherlands by the Spaniards and Austrians.

The obverse of this piece suggests nothing unusual. It

bears the head of Margaret of Austria, then Governess of the Netherlands, and the legend:

MARGARETA DE AVSTRIA *Dux Parmæ ET Placentiæ* **GERMANIÆ INFERIORIS** *Gubernatrix*

Not so the reverse. Here we see the unfortunate Lion of Belgium beneath the press of the Inquisition, one handle

GHEDECKE CLANCK.

31



1. De Prins van Parma.
2. Gheueken van Spanje.
3. Gheueken van Parma.
4. Don J. Alva.
5. Don Frederico.
6. Cardinal Granvelle.
7. Ypres.
8. De Prins van Parma.
9. De Prins van Parma.
10. De Prins van Parma.
11. De Prins van Parma.
12. De Prins van Parma.
13. De Prins van Parma.
14. De Prins van Parma.
15. De Prins van Parma.
16. De Prins van Parma.
17. De Prins van Parma.
18. De Prins van Parma.
19. De Prins van Parma.
20. De Prins van Parma.
21. De Prins van Parma.
22. De Prins van Parma.
23. De Prins van Parma.
24. De Prins van Parma.
25. De Prins van Parma.
26. De Prins van Parma.
27. De Prins van Parma.
28. De Prins van Parma.
29. De Prins van Parma.
30. De Prins van Parma.
31. De Prins van Parma.

*Geleit van haren froom gheleit dier op de dier,
En niet en wilt of giet dier dier en niet froom,
Dier onder lepen 't land, vordere menich, vordere menich,
Dier of en niet dier froom, dier of en niet dier froom.*

*Verleert recht, plicht, nimmer dier dier dier en niet froom,
Dier froom dier froom, dier froom dier froom,
Dier froom dier froom, dier froom dier froom,
Dier froom dier froom, dier froom dier froom.*

FIG. 3.

of which is pulled, under the supervision of the Pope and the King of Spain, by the Governess Margaret, another by the Cardinal de Granvelle, and a third by the Duke of Alva, while Don Federico tightens the fetters round the lion's feet. Around are numerous spectators including the bishop of Ypres, and at the foot of the press are strewn torn charters—'little scraps of paper'—containing the privileges of the Netherlands. The inscription, **QVID PREMITIS REDEAT SI NOBILIS IRA LEONIS** 1566, may be

amplified, "Why press him thus? The lion's noble rage shall still return against his foes."

This design is taken from a print in a work by Adrian Valerius,¹ which is here reproduced (Fig. 3) as explaining the details of the medal. The torn state of the Charters is here better shown, and the broken crown of the Netherlandish lion lies beside them. But the lion's head upturned in fury, as seen on the medal, adds a dramatic touch that is wanting on the engraving.

Sad as was the plight of the Belgian Lion beneath the tyranny of Spain and Austria, here so vividly set forth, no medallic representation tolerable to the sight of civilized society could record the acts of criminal outrage and butchery, superadded to screws of extortion still more scientifically, perfected which have been perpetrated to-day upon the unarmed population of Belgium by the hordes of Prussian militarism equipped with engines of destruction beyond the dreams of Attila.

A vote of thanks was unanimously accorded the President for his address, on the motion of Professor Oman, seconded by Mr. Henry Symonds, and acknowledged by Sir Arthur Evans.

The President then announced the result of the ballot for office-bearers for 1915-1916 as follows:

President.

SIR ARTHUR J. EVANS, P.S.A., M.A., D.LITT., LL.D.,
PH.D., F.R.S., F.B.A.

Vice-Presidents.

SIR HENRY H. HOWORTH, K.C.I.E., D.C.L., F.R.S., F.S.A.
L. A. LAWRENCE, Esq., F.S.A.

¹ *Nederlandische Gedenck-clark*, Haarlem, 1626, p. 15.

Treasurer.

PERCY H. WEBB, Esq.

Secretaries.

JOHN ALLAN, Esq., M.A., M.R.A.S.

FREDERICK A. WALTERS, Esq., F.S.A.

Foreign Secretary.

J. GRAFTON MILNE, Esq., M.A.

Librarian.

OLIVER CODRINGTON, Esq., M.D., F.S.A., M.R.A.S.

Members of the Council.

G. C. BROOKE, Esq., B.A.

MISS HELEN FARQUHAR.

HERBERT A. GRUBER, Esq., F.S.A.

GEORGE FRANCIS HILL, Esq., M.A.

J. MAVROGORDATO, Esq.

LIEUT.-COL. H. WALTERS MORRISON, R.A., F.S.A.

REV. ROBERT SCOTT MYLNE, M.A., B.C.L., F.S.A., F.R.S.E.

EDWARD SHEPHERD, Esq.

HENRY SYMONDS, Esq., F.S.A.

H. W. TAFFS, Esq.

A vote of thanks was awarded to the Auditors and Scrutineers on the motion of the President, who then adjourned the Society till October.

CATALOGUE OF LANTERN-SLIDES AND NEGATIVES

(Supplement 2 to the List published in 1913.)

GREEK AND ROMAN COINS.

TOWNS, &C., IN ALPHABETICAL ORDER.

- H C897 Abydus (Ionian Revolt) electrum, with electrum of Samos and Phocaea.
- H 9552 Abydus Æ; Alinda Æ; Sagalassus and Temnus Alexandrine Æ (*Num. Chron.*, 1917, Pl. II, 3, 5, 7, 9).
- H C883 Achaean League, 4th cent. Æ stater and drachm; Elymais Æ 2nd cent. A. D.
- H C892 Achaean League, 4th cent. Æ stater; Aetolian League, 3rd cent. Æ stater.
- H 9555 Aegeae Ciliciae Æ; Cilician small Æ; Elaoussa Æ (*Num. Chron.*, 1917, Pl. II, 10-16).
- H C895 Aegina, 6th cent. Æ; Chalcis and Coressia (Ceos) Æ.
- H C892 Aetolian League, 3rd cent. Æ stater; Achaean League, 4th cent. Æ stater.
- H 9552 Alinda Æ; Abydus Æ; Sagalassus and Temnus Alexandrine Æ (*Num. Chron.*, 1917, Pl. II, 3, 5, 7, 9).
- H C884 Alyzia Æ; Segesta and Lycia Æ; Jewish Æ.
- H 9578 Aradus and other coinages with turreted heads.
- H C839 Argos, Corinth (grazing Pegasus), Phaestus (Talos), Æ (*Num. Chron.*, 1919, p. 11).
- B 819 Arpi.
- H C891 Assyria, supposed Prehellenic coinage (lead tesseræ).
- H 9549 Athens Æ and Æ; Tanagra leaden proof (*Num. Chron.*, 1917, Pl. I, 5, 7, 13-16).
- H 9550 Autocane Æ; Cyzicus El.; Ionian uncertain Æ; Lampsacus Æ (*Num. Chron.*, 1917, Pl. II, 1, 2, 4, 17).
- B 822 Beneventum, Cosa, Teate Æ.

- H C340 Caria uncertain; Cnidus; Rhodes *AR* (*Num. Chron.*, 1919, pp. 11, 12).
- H C899 Chalcis or Olynthus? 6th cent. *AR*, agonistic types.
- H C895 " " (*Num. Chron.*, 1922, Pl. VII, 4); Aegina and Coressia (Ceos), 6th cent. *AR*.
- H 9555 Cilician small *AR*; Aegeae *AE*; Elaeussa *AR* (*Num. Chron.*, 1917, Pl. II, 10-16).
- H C340 Cnidus *AR*; Caria uncertain; Rhodes (*Num. Chron.*, 1919, pp. 11-12).
- H C895 Coressia (Ceos), 6th cent. *AR*; Aegina and Chalcis *AR*. Corinth (grazing Pegasus); Phaestus; Argos *AR* (*Num. Chron.*, 1919, p. 11).
- B 822 Cosa, Beneventum, Teate *AE*.
- H 9547 Croton *AR*; Etruria *AE*; Syracuse *AR* (*Num. Chron.*, 1917, Pl. I, 1-6).
- H C331 Croton *AR*; Nola *AR*; Metapontum *AR* (*Num. Chron.*, 1919, Pl. I, 1-4).
- H C321 Cydonia, Phalasarna, Polyrrhenium, *AR*.
- H C323 Cydonia and Sybrita *AR*.
- H 9575 Cyrene and other coinages, comparing heads of Zeus, &c.
- H 9550 Cyzicus *EL*; Ionian *AR*; Lampsacus *AE*; Autocane *AE* (*Num. Chron.*, 1917, Pl. II, 1, 2, 4, 17).
- H 9555 Elaeussa *AR*; Cilician *AR*; Aegeae *AE* (*Num. Chron.*, 1917, Pl. II, 10-16).
- H C888 Elymais *AE* 2nd cent. *A.D.*; Achaean League 4th cent. *AR*.
- H 9547 Etruria *AE*, Croton, and Syracuse *AR* (*Num. Chron.*, 1917, Pl. I, 1-6).
- H C333 Gela, Leontini, and Segesta *AR* (*Num. Chron.*, 1919, pp. 4-5).
- H 9578 Heraclea Bithyniae and other coinages with turreted heads.
- H 9556-9562 Heraclea Lucaniae, illustrating *Num. Chron.*, 1917, pp. 169-179.
- H 9571 Heraclea Lucaniae *AR* (*Num. Chron.*, 1918, Pl. VI, 16-18).
- H 9572 Heraclea Lucaniae *AR* (*Num. Chron.*, 1918, Pl. VI, 19-22).
- H C890 Himyarite *AE* (B.M. Cat. Arabia, Pl. LV, 2-9) with Jewish *AE*.

- H 9551 Ionian uncertain El (*Num. Chron.*, 1917, Pl. II, 6).
 H 9550 „ uncertain At; Cyzicus El.; Lampsacus Æ;
 Autocane Æ (*Num. Chron.*, 1917, Pl. II, 1, 2, 4, 17).
- H 9550 Lampsacus Æ; Cyzicus El.; Ionian At; Autocane Æ (*Num. Chron.*, 1917, Pl. II, 1, 2, 4, 17).
- H C333 Leontini, Gela, and Segesta Æ (*Num. Chron.*, 1919, pp. 4-5).
- H 9575 Loeri Epizephyrii and other coinages, comparing heads of Zeus, &c.
- H C884 Lycia Æ with Segesta and Alyzia At and Jewish Æ.
- H 9548 Lysimacheia Æ; Demetrius Poliorcetes At (*Num. Chron.*, 1917, Pl. I, 9-11).
- H C896 Magnesia ad Maeandrum Æ staters (*Num. Chron.*, 1922, Pl. VII, 9).
- H 9579 Mallus and Persis, satrapal heads. Vahsu (Oxus treasure).
- H 9578 Marathus and other coinages with turreted heads.
- H 9568 Metapontum Æ (*Num. Chron.*, 1918, Pl. V, 1-5).
- H 9569 „ „ (*Num. Chron.*, 1918, Pl. V, 6-9).
- H 9573 „ „ (*Num. Chron.*, 1918, Pl. VI, 23, 24).
- H 9570 „ „ and Tarentum Æ (*Num. Chron.*, 1918, Pls. V, VI, 10-15).
- H C331 Metapontum (head of Heracles), Nola, Croton (*Num. Chron.*, 1919, Pl. I, 1-4).
- H 9575 Metapontum and other coinages, comparing heads of Zeus, &c.
- H C331 Nola, Croton, Metapontum (*Num. Chron.*, 1919, Pl. I, 1-4).
- B 819 Nuceria Campaniae.
- H C895, 899 Olynthus or Chalcis? (see Chalcis).
- H C898 Panticapaeum Æ staters, c. 350-300 B.C.
- H C885 Peparethus Æ staters, c. 480 B.C., dolphin-rider reverse.
- H 9579 Persis and Mallus, satrapal heads. Vahsu (Oxus Treasure).
- H C824 Phaestus At, resting Heracles.
- H C330 „ At and Æ, Talos and his dog.
- H C339 „ At, Talos; Argos and Corinth At (*Num. Chron.*, 1919, p. 11).

- H C325 Phaestus *AR*, Velchanos.
H C321 Phalasarna, Cydonia, and Polyrrhenium *AR*.
H C897 Phocaea (*Num. Chron.*, 1922, Pl. VII, 10), Samos
and Abydos *EL*.
H C321 Polyrrhenium, Cydonia, and Phalasarna *AR*.

H C340 Rhodes, Caria, and Cnidus *AR* (*Num. Chron.*, 1919,
pp. 11-12).
B 845, 846 Roman Britain.
B 817-821 Romano-Campanian.
H 9576 „ with other chariot-types.

H 9552 Sagalassus *AR*; Temnus *AR*; Abydos *Æ*; Alinda *AR*
(*Num. Chron.*, 1917, Pl. II, 3, 5, 7, 9).
H C897 Samos and Abydos *EL* staters (Ionian Revolt);
Phocaea *EL* hecte.
H C332 Scylacium (*Num. Chron.*, 1919, Pl. I, 5); Tarentine
horseman *AR* (*ibid.*, p. 3).
C 884 Segesta *AR* (*Num. Chron.*, 1922, Pl. I, 18); Alyzia *AR*;
Lycia *AR*; Jewish *Æ*.
H C335 Siculo-Punic tetradrachm with Syracusan deca-
drachm and 4th cent. *EL* (*Num. Chron.*, 1919,
p. 6).
H 9577 Side *AR* (Athena); Andragoras *AR*.
H 9576 Sidon and other chariot-types.
H C323 Sybrita and Cydonia *AR*.
H 9547 Syracuse and Croton *AR*; Etruria *Æ* (*Num. Chron.*,
1917, Pl. I, 1-6).
H C335 Syracuse, Eusebius decadrachm; 4th cent. *EL*;
Siculo-Punic tetradrachm (*Num. Chron.*, 1919,
p. 6).
H C334 Syracuse, early to mid 5th cent. tetradrachms (*Num.*
Chron., 1919, p. 6).

H 9549 Tanagra leaden proof, Athens *AR* and *Æ* (*Num.*
Chron., 1917, Pl. I, 5, 7, 13-16).
H C332 Tarentum horseman *AR* (*Num. Chron.*, 1919, p. 3);
Scylacium (*ibid.*, Pl. I, 5).
B 822 Teate, Beneventum, Cosa *Æ*.
H 9553 Temenothyrae *Æ* medallion (*Num. Chron.*, 1917,
Pl. III, 2).
H 9552 Temnus, Sagalassus, Alinda, *AR*; Abydos *Æ* (*Num.*
Chron., 1917, Pl. II, 3, 5, 7, 9).
H 9575 Tenos and other coinages with heads of Zeus, &c.
H C894 Thasos *N* half-stater, *AR* tetradrachm, c. 400 B.C.

- H C336 Thasos *AR* ; Philip II *AR* and *A* (*Num. Chron.*, 1919, pp. 7-8).
 H C893 Thurium *AR* stater and distater, c. 400 B.C. (*Num. Chron.*, 1922, Pl. VI, 1).

EMPERORS, KINGS, OR DYNASTS, AND MAGISTRATES,
 IN ALPHABETICAL ORDER.

- H C341 Alexander I, Bala, and Seleucus I *AR* (*Num. Chron.*, 1919, Pl. II, 10, 11).
 H C337 Alexander III *A* and *AR* ; Philip III *AR* (*Num. Chron.*, 1919, p. 8).
 H C670-677 Alexander III, Cypriot coins (*Num. Chron.*, 1915, pp. 294 ff.).
 C 890 Alexander Jannaeus *AE* ; Antigonus *AE* ; Himyarite *AE*.
 C 884 " " " with Segesta, Alyzia, Lycia, *AR*.
 H 9574 Andragoras *A* and *AR*.
 H 9577 " *AR* ; Side *AR* (Athena).
 C 890 Antigonus, Alexander Jannaeus, and Himyarite *AE*.
 H 9554 Antiochus I *AR* ; Attalus Epiphanes *AR* ; Demetrius I of Syria *AR* ; Orodes II (III) *AR* (*Num. Chron.*, 1917, Pl. III, 4-7).
 H C326-329 Antiochus IX of Syria (*Num. Chron.*, 1919, Pls. X, XI).
 H 9554 Attalus Epiphanes *AR* ; Antiochus I *AR* ; Demetrius I of Syria *AR* ; Orodes II *AR* (*Num. Chron.*, 1917, Pl. III, 4-7).
 B 2169 Augustus, typical coins.
 B 823-828 " *A*, *AR*, *AE*.
 B 2167 " and Tiberius, coinage of Lugdunum.
 B 847 Carisius and Scribonius Libo *AR*.
 B 2168 Claudius, Nero, Galba. Coinage of Lugdunum.
 B 2170 Constantius II, Medallions (Kenner, Taf. VII).
 H 9548 Demetrius Poliorcetes *AR* ; Lysimacheia *AE* (*Num. Chron.*, 1917, Pl. I, 9-11).
 H 9554 Demetrius I of Syria *AR* ; Antiochus I *AR* ; Attalus Epiphanes *AR* ; Orodes II *AR* (*Num. Chron.*, 1917, Pl. III, 4-7).
 C 881 Demetrius I and Laodice of Syria, *A* and *AR* staters.
 B 812-815 Galba, posthumous *A*, *AR*, *AE*.
 B 2168 Galba ; Claudius ; Nero. Coinage of Lugdunum.

- B 884 Herennia Etruscilla; Herennius Etruscus; Hostilian *Æ*
- C 881 Laodice of Syria and Demetrius I, *N* and *Æ*.
- H 9548 Lysimacheia *Æ*; Demetrius Poliorcetes *Æ* (*Num. Chron.*, 1917, Pl. I, 9-11).
- H C338 Lysimachus *N* and *Æ* (*Num. Chron.*, 1919, p. 9).
- H C332 " *Æ* tetradrachm, magistrate Aithon.
- B 801-804 Nero *Æ*, Rome and Lugdunum.
- H 9554 Orodes II (III); Antiochus I, &c. (*Num. Chron.*, 1917, Pl. III, 4-7).
- H C336 Philip II of Macedon *Æ* and *N*; Thasos *Æ* (*Num. Chron.*, 1919, pp. 7-8).
- H C337 Philip III of Macedon *Æ*; Alexander III *N*, *Æ* (*Num. Chron.*, 1919, p. 8).
- B 829-830 Philip I (emperor) *Æ*.
- C 887 Ptolemy I as satrap of Egypt, *Æ*. Alexander head. Pallas Promachus.
- B 847 Scribonius Libo *Æ*; T. Carisius *Æ*.
- H C341 Seleucus I and Alexander I, Bala *Æ* (*Num. Chron.*, 1919, Pl. II, 10, 11).
- B 831-833 Trajan Decius *Æ*
- H 9850 Vahsu, gold seal-ring (Oxus find).
- H 9579 Vahsu (Oxus find). Satrapal heads of Persis and Mallus.
- B 816 Vespasian *Æ*.
- B 805-811 Vespasian *N*, *Æ*, *Æ*.

MISCELLANEOUS GREEK AND ROMAN—SPECIAL SUBJECTS.

- C 881-890 and B 847 Slides to illustrate ancient methods of coining (cf. G. F. Hill in *Num. Chron.*, 1922, pp. 1 ff).
- C 882 Die of an Athenian tetradrachm.
- 411 N Punch-marks on Persian sigloi (*Num. Chron.*, 1916, p. 5).
- H 9584-6, C 891 Primitive coinages.
- H 9584 Bronze ingots from Cyme (*Journ. Intern.*, 1906, Pl. III).
- H 9585 Iron obeliskoi from Argive Heraeum (*ibid.*, Pl. X).

- H 9586 Bronze spits in Rouen Museum and from Ancona
(*Rev. Num.*, 1911, p. 11).
 " Pre-Hellenic coinage of Assyria? (*Num. Chron.*,
 1922, p. 176).
 H 9581-3 Gold coinages of 5th and 4th centuries B.C.
 H 9574-9 Oxus treasure.
 H 9575-6, 9578 Special types:—Heads of Zeus, turreted
 heads, chariot-types compared with Andragoras
 coins.
 B 847 Roman methods of coining (T. Carisius and Scribo-
 nius Libo A.).
 B 844 Roman imperial portraits.
 B 835 " religious types.
 B 836, 837 Roman military types.
 B 838 Roman provincial types.
 B 839 " "Consecratio" types.
 B 840 " buildings.
 B 841 " senate, knights, people, &c.
 B 842 " imperial largesses, endowments, &c.
 B 843 " foreign policy.

GREAT BRITAIN AND IRELAND

ANGLO-SAXON.

- 321-326 NS Mercia. Offa pennies.
 371 NS " Offa penny; Constantine V and Leo
 IV A'; Charlemagne denier.
 321, 322 NS Mercia. Cynethrith penny with pennies of Offa.
 321 NS Canterbury. Jaenberht with pennies of Offa.
 325 NS " Aethilheard with pennies of Offa.
 372 NS Edward the Elder, flower and building types.
 396 N Cnut, type H (xvi) of Watchet (*B. M. Cat.*, Pl. XIX,
 13).
 373 NS Edward the Confessor (last type); Henri I, Paris
 denier.

ENGLISH POST-CONQUEST.

- 397 N William I, type IV of Taunton (*B. M. Cat.*,
 Pl. X, 6).
 97 NS Stephen. Coins with erased obverses.
 98 NS " "Pereric" coins.
 374 NS " (type I); Robert de Stuteville; Eustace
 Fitzjohn (Lion type); Louis VII, Mantes denier.
 99 NS Empress Matilda.
 100 NS Henry of Anjou.

- 376 NS Henry III gold penny; Louis IX écu; Philip III or IV chaise.
- 101 S Short-cross pennies; series of types.
- 375 NS Short-cross (class V) and long-cross (class V, Randulf of Bury) pennies with sterlings of Frederick II (short-cross) and of Lappe (long-cross).
- 377 NS Edward I groat; Edward III groat; Louis IX, gros tournois.
- 378 NS Edward I, pattern penny (*Num. Chron.*, 1923, p. 56) and penny of 1279; sterling of John I of Brabant.
- 329 N Edward I, pattern penny (*Num. Chron.*, 1923, p. 56) from a drawing.
- 382 NS Edward III, First noble and Quarter-noble.
- 377 NS " groat of 1351; Edward I groat; Louis IX gros tournois.
- 379 NS Edward III, Anglo-Gallic écu; Philip VI écu.
- 380 NS " leopard and guiennois.
- 381 NS Black " Prince, Anglo-Gallic pavilion of Poitiers and hardi of Limoges.
- 383 NS Edward IV, ryal and quarter-ryal.
- 104 N Henry VI, Anglo-Gallic salute; Flemish rider of Philip le bon; florin of Conrad III of Mainz.
- 384 NS Edward IV angel; Philip VI ange; Louis XI angelot.
- 385 NS Henry VII, ryal and sovereign (Dragon mark).
- 357 NS " sovereign and ryal (*Num. Chron.*, 1918, Pl. X, 9, 10).
- 358, 359 NS Henry VII, sovereigns (*Num. Chron.*, 1918, Pl. XI, 1, 2, 3, 4).
- 360 NS Henry VII, angels.
- 361 NS " angel and half-angel.
- 389 NS " shilling; Louis XII testoon.
- 362-366 NS " groats.
- 367 NS " shilling and half-groat.
- 368 NS " half-groats.
- 369 NS " pennies.
- 370 NS " pennies and halfpence.

SCOTTISH.

- 158 NS Mary, Queen of Scots, pattern half-testoon by Acheson (Burns, Pl. LVII, 781).

COLONIAL.

- 408 NS Brit. W. India, plugged *A'* onza of Jamaica? (*Num. Chron.*, 1916, p. 276).

CONTINENTAL.

- 371 NS Byzantine, Constantine V and Leo IV *N*; with Offa and Charlemagne pennies.
 371 NS France, Charlemagne denier; Offa penny; Constantine V and Leo IV *N*.
 373 NS France, Henri I Paris denier; Edward Confessor penny.
 374 NS France, Louis VII Mantes denier; Stephen and baronial pennies.
 376 NS France, Louis IX écu; Philip III or IV chaise; gold penny of Henry III.
 377 NS France, Louis IX gros tournois; Edward I and III groats.
 379 NS France, Philip VI écu; Edward III écu.
 384 NS " " ange; Louis XI angelot; Edward IV angel.
 389 NS France, Louis XII testoon; Henry VII shilling.
 378 NS Brabant sterling of John I with Edward I pennies.
 375 NS Lippe sterling (long-cross) with sterling of Frederick II and English short- and long-cross pennies.
 375 NS Emperor Frederick II sterling (short-cross) with Lippe sterling and English short- and long-cross pennies.
 412 NS Abyssinia (*Num. Chron.*, 1917, Pl. III, 8-14).

MEDALS, BADGES, ETC.

BRITISH.

- 261 S John, Duke of Albany (*Med. Ill.*, Pl. II, 3).
 410 N Elizabeth, medalets by Derick Anthony (?).
 159 S " medals (*Med. Ill.*, Pl. VIII, 1, 2).
 160 S Mary, Queen of Scots (*Med. Ill.*, Pls. VI, 14, VII, 4).
 102 NS James I (hatless), by Simon Passe (Brit. Mus. and Victoria and Albert specimens).
 103 NS Uncertain portrait by Simon Passe.
 279 N Edgehill (*Med. Ill.*, Vol. I, p. 298, 118); Prince Rupert (*ibid.*, p. 323, 159); Essex (p. 296, 114).
 276 NS Edgehill (*Med. Ill.*, Vol. I, p. 298, 118); Declaration of Parliament (p. 293, 110); Forlorn Hope (p. 301, 112).
 269 NS Laud (*Med. Ill.*, Vol. I, p. 315, 146); Strafford (p. 288, 102); Pointz (p. 325, 163); Lauderdale (p. 328, 169).
 427 NS Medals by Simon (Naval Reward 1653; Dunbar; Coronation of Charles II).

- 390 N Blake Medal (*Med. Ill.*, Vol. I, p. 398, 26); Saving the Triumph (p. 400, 29); Dunbar (p. 391, 13).
 277 NS Sancroft and the Bishops (*Med. Ill.*, Vol. I, p. 622, 37); Flight of James (p. 643, 71; p. 650, 4; and p. 644, 73).

MEDALS (other than British).

- 267 S Vittorino da Feltre and Sigismondo Malatesta (*rev.*) by Pisanello.
 248 S Federigo of Urbino by Paolo da Ragusa.
 413-426 NS Matteo de' Pasti, medals illustrating *Num. Chron.*, 1917, pp. 298-312.
 278 N Savonarola, Florentine school (Armand, I, p. 105).
 242 S Christian I of Denmark and Gianfrancesco II Gonzaga by Bart. Melioli.
 265 S Lodovico III Gonzaga by Pietro da Fano.
 266 S Francesco and Federigo Gonzaga by Talpa.
 268 S Giulia Astallia.
 247 S Giuliano and Clemente della Rovere; Maximilian and Mary of Burgundy. By Giòv. Candida.
 249 S Vettor Gambello by himself.
 243 S Andria Briosco, il Riccio, by himself.
 244 S Guido Rangoni by Cavallerino; another by Ant. da Vicenza; Ascanio Gabuccini by Ant. da Vicenza.
 263 S Charles VIII and Anne of Bretagne by Louis Lepère, Nicholas de Florence and Jean Lepère.
 250 S Louis XII by Michel Colombe.
 262 S Jacques de Vitry by the Medallist of 1518; Jacques Gauvain by himself.
 264 S Two medals by Dauet Regnault.
 251 S Charles IX by Brucher and Olivier.
 409 S Antonius de Taxis (*Simonis*, Pl. II, 4).
 394 N Dutch. Capture of Spanish Fleet 1628 (*Battenberg*, 516); destruction of Spanish Fleet off Dover (*ibid.*, 534).
 328 N Dutch. Sinking of the Amstelstroom (*B. M. Guide*, p. 137, no. 117).
 407 NS Brussels, jetons of 1667, 1668, 1678 with St. Michael. Dutch engraving from work of Valerius (1626), illustrating medal of oppression of Netherlands in 1566 (*Num. Chron.*, 1915, *proc.* p. 40).

Slides have been added of Nos. 116, 121, 122, and 174.

CENTRAL ARCHAEOLOGICAL LIBRARY,
NEW DELHI

Borrower's Record

Catalogue No. 737,03/N.C.-1243.

Numismatic Chron

Numismatic Chron

